

**INFORMATION AND COMMUNICATION TECHNOLOGY RESOURCE  
AVAILABILITY AND DISTANCE EDUCATION IN SELECTED  
UNIVERSITIES IN SOMALILAND**

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A Thesis

Presented to the

College of Higher Degree and Research

Kampala International University

Kampala, Uganda

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In Partial Fulfillment of the Requirements for the Degree  
Master of Business Administration in Information Technology

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March, 2013

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## DECLARATION A

This thesis is my original work and has not been presented for a degree or any other academic award in any university or institution of learning.

Abdisamad Egal 


Name and Signature of Candidate

14-03-2013

Date

## DECLARATION B

I confirm that the work reported in this thesis was carried out by the candidate under my supervision.

Dr. Malinge Ramadhan 

Name and Signature of Supervisor

14/3/2013

Date

## **DEDICATION**

This work is dedicated to the Almighty Allah as He has enabled me to achieve this great success. It is also dedicated to my beloved Uncle Ali Abdullahi Buh who supported me financially and morally.

### **ACKNOWLEDGMENTS**

First and foremost I acknowledge the Almighty Allah as He has enabled me to achieve this great success. I am grateful to the Amoud University for granting, the professional development leave that motivated me to finish this study.

A special thank goes to the Kampala International University, DVC of the College of Higher Degrees and Research, Dr. Novermbrieta R.Sumil, for her patience and encouragement during the substantial length of this project.

I sincerely appreciated the guidance and support of my supervisor: Dr. Malinga Ramadhan of K IU.

Special thanks to the chairman of Penalist Dr. Manuel Sumil, the other panelist Dr. Ssendagi Mohamad and Dr. Kirabo Joseph B. Also I thank to my respondents at the Faculty of ICT and Distance Education at the University of Hargeisa and Amoud University in Somaliland for their genuine responses during data collection.

I would not have completed the quantitative analysis without the skilled guidance of Mr. Nur Abdi Nur. My gratitude also goes to Mohamed Omar for his expertise in transforming my study into a polished thesis.

I blessed to have a wonderful family and great group of friends. The unrelenting "encouragement" I from my best friends, honorable Mahad Mohamed Dually and Hirsi Abdilahi, motivated me to finish, just getting them off my back. Additionally, the love and understanding provided by my mother, Dhool Abdulahi, continually sustained me throughout this effort.

Finally, and most importantly, I want to express my heartfelt gratitude to my wife Shamis Ahmed Ali, for her continual encouragement and confidence in me. She never, ever let me think that I would not finish. Her loving and supportive attitude were the primary reason I were able to complete this project.

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## **LIST OF ACRONYMS**

ICT	Information Communication Technology
AU	Amoud University
UoH	University of Hargeisa
MBA	Master of Business Administration
KIU	Kampala International University
MBA-IT	Master of Business Administration in Info Technology
ED	Distance Education
TV	Television
CIM	Computer-mediated Education
AU	Amoud University
UoH	University of Hargeisa
SPSS	Statistics Package of Social Science
CD-ROM	Compact Disk Read Only Memory

## **ABSTRACT**

The research intended to investigate ICT resource availability and distance education in selected universities in Somaliland. It also intended to achieve objectives such as, (1) to identify the demographic characteristics of the respondents in terms of gender, age, qualifications under the ICT discipline and number of the years in distance education field, (2) to determine the level of ICT resource availability in selected universities in Somaliland (3) to determine the extent of distance education selected universities in Somaliland (4) to establish whether there was a significant relationship between ICT resource availability and the extent of distance education. This study employed the descriptive survey design specifically the descriptive comparative and descriptive correlational strategies.

Based on the findings of this study, the research has clearly shown that most of the respondents had access and used the Information Communication Technology resource in distance education and there was the significant relationship between ICT resource availability and effectiveness of distance education. In conclusion, both universities did not utilize the most appropriate tools, technology and media in delivery of distance learning programs currently, and the online systems were missing, and video conference systems were not available in these universities. Also, there was evidence that distance learners were well prepared to engage in self-directed learning which was very crucial in learning process remotely, so this research validated that the Transactional Theory of Moore was the most appropriate for distance education research theory, which refers to the theory on distance education that occurs between teachers and learners in an environment having the special characteristic of separation of teachers from learners where learners are self-directed. The study recommended that policy-makers, practitioners and Somaliland higher institutions should continue developing and implementing distance education programs when those programs meet identified ICT resource needs and when they were designed and managed as carefully as traditional education programs.

## **CHAPTER ONE**

### **PROBLEM AND ITS SCOPE**

#### **Background of the study**

According to Meadowcroft (2006) Distance education is practiced extensively around the world with some nations having extensive distance education programs and institutions. However, the nature of distance education varies considerably across countries in terms of the model and media employed. For example in some places, distance learning involves an instructor visiting local sites occasionally whereas in other places there is no physical contact and all learning materials are distributed via ICT resources such mail, radio, or TV. ICT resources are coming to play an increasing prominent role in information distribution and student-teacher interaction in all countries (developed and developing).

According to Schneider & Germann, (2001) history of distance learning is divided into three generations, given as follows. First generation: "correspondence study", where students and teachers communicate with each other through the mail. Second generation: "multimedia distance teaching" or broadcast/teleconferencing", where television and radio broadcasts are used by the students and teachers for communication. Third generation: "interactive, web-based instruction", where resources of the World Wide Web enhance communication, not only between students and teachers, but among students as well. The evidence of first generation is found at least in 1883 in Sweden; in United

States the movements begin in 1890's. The start of second generation in the mid of 20th century has speed-up the communication between instructor and students. However, it is still one-way communication. The beginning of "interactive, web-based instruction" (third generation) has solved this problem, where the two-way communication is possible through news-groups, net-meetings, emails, and so on.

Although the old ways of delivering distance education with correspondence and radio/TV broadcasts are still in practice, computer based technologies are gaining immense popularity among both the educators and students. A wide range of options is available to distance educators, including both the traditional ways as well as the recent technologies.

They fall into four major categories: (1) **Voice**: Instructional audio tools include interactive technologies of telephone, and audio-conferencing. (2) **Video**: Instructional video tools include still images as slides, pre-produced moving images (e.g., film, videotapes), and real-time moving images combined with audio-conferencing (one-way or two-way video with two-way audio). (3) **Data**: Computers send and receive information electronically. For this reason, the term "data" is used to describe this broad category of instructional tools. Computer applications for distance education are varied and include: Computer-assisted instruction (CAI), which uses the computer as a self-contained teaching machine to present individual lessons. Computer-managed instruction (CMI), which uses the computer to organize instruction and track student

record and progress. The instruction itself needs not be delivered via a computer, although CAI is often combined with CMI. Computer-mediated education (CME), which describes computer applications that facilitate the delivery of instruction. e.g., email, fax, real-time computer conferencing, and World Wide Web applications. (4) **Print:** A foundational element of distance education programs and the basis from which all other delivery systems have evolved. Various print formats are available including: textbooks, study guides, workbooks, course syllabi, and case studies. Having known about the technologies, a question arises "which technology is best? ". The answer is "it depends". Although technology has a key role in the delivery of distance education, educators must focus themselves on the instructional outcomes, rather than the technology of delivery. Effective distance education is dependent on the needs of students, the requirements of the content, and the constraints faced by the teacher as well as the student. Once these problems are addressed appropriately, adequate delivery system can be adopted. Beebe, M. A. (2004).

Globally, in many educational systems in developing countries, the losers in the change process are those clients on the margins of the existing system. Rural children and teachers in isolated, under-resourced, and neglected schools, with many unqualified teachers and little access to information, are those least prepared for the change. (Lewins 1991, p.16). What can new information and communication technologies (ICTs) do to raise the status and actual and perceived quality of distance education status in developing countries? And what can they do to influence the

status of those who engage in distance learning? Can ICTs benefit those who are resource poor and have limited or no access to paper-based modes of distance education delivery? The 1990s saw an increase in developing countries' policies to introduce computers in schools, with the aim of enabling students to gain basic computer skills. The following section questions who is benefiting from this introduction of computers and how. Ifinedo, P. (2006).

In Africa, distance education figures prominently among strategies to assist African countries escape from educational crisis. Africa has already made considerable use of information communication technology in distance education to extend access to formal education, although most public institutions have often been severely constrained by lack of finance, manpower and ICT resource availability. Case studies of Zambia, Kenya and Zimbabwe suggest that critical factors for effectiveness of distance education are the provision of adequate resources along with some other factors. It is expected that distance education will continue to be used to strengthen formal education by training primary teachers, extending access to secondary education and by providing high school education although, so far, few African countries have attempted degree level studies at a distance. As a result of extensive research into distance education provision in Africa, the Nigerian National Commission for UNESCO has published in the current year the directory of distance education institutions in Africa. The directory lists 88 distance institutions from across Africa.

Several East African countries are prioritizing the use of ICT in education to achieve critical strategic developmental objectives. For example, Kenya's *(NICT) Strategy for Education* recognizes that 'an ICT literate workforce is the foundation on which the nation will become a knowledge-based economy, education a platform for equipping the nation with ICT skills in order to create dynamic and sustainable economic growth.' In addition, Kenya envisages that the use of ICT will help the country to meet the objectives of education for all and universal primary education. In most East African universities in particular face a critical shortage of skilled workers who understand basic and advanced programming to plan, design, and implement distributed information systems and manage large-scale e-learning projects. Another challenge is the high turnover of skilled technical personnel, as institutions are unable to pay salaries that are competitive with the private sector. Internationally, the need to provide quality education for all learners has motivated East African countries to develop plans focused on the use of ICT for teaching and learning. The drive to promote ICT in education has typically been aligned with broader social and economic goals. In particular, visions of how ICT in education can lead to participation in a global knowledge economy and how ICT will improve East African countries economies are explicated in ICT policies. The 1998 Working Conference on *Capacity Building for IT in Education in Developing Countries* demonstrated the importance that developing countries' governments place on computer education (Marshall & Ruohonen, 1998). The conference representatives identified the need to provide computers to enable students to first develop computer skills, and second to use



computers to learn at a distance. According to Somaliland Ministry of Education (2007), the history of Higher Education System especially universities and colleges in Somaliland started with the establishment of Amoud University in 1998. The collapse of the Somali state in 1991 and the declaration of the independence of Somaliland closed the option of expensive journey to Mogadishu once and for all. In recent times, the country has obtained more than 7 higher education institutions within a period of 20 years. These institutions offer different and various fields of knowledge and skills with different mode of learning off-campus and at the campus learning to produce the needed manpower. According to Distance education, Although there has been a recent explosion of distance education, particularly due to the new Information Communication Technologies available, the origin of distance education can be traced back to over 100 years ago (Hanson et al, 1997; Meyer, 2002; Birnbaum, 2001, Mehrotra et al, 2001). According to Moore (1990), distance education, referred to in Moore's writing as correspondence study, began in the late 1800's. For the time being Somaliland universities provide some distance education with resource of Information Communication Technology, but these resources are not enough to offer variety programs of distance education.

## **Problem statement**

In higher education institutions, availability of ICT resources has a great role to be played in increasing the effectiveness of Distance education programs they are offering. According to Cabrera (2006), it is difficult and may be even impossible to imagine future Distance education environments that are not supported in one way or another by information and communication technology (ICT). Somaliland, like other countries in the world is looking to educational possibilities offered by Distance education and ICT as a way to expand and improve its educational systems.

However, higher education institutions in Somaliland has been offering very limited Distance education programs because some ICT resource are not available (e.g. television, physical postal system and radios), where some other ICT resource are available which are not adequate for the students e.g. Personal computers, storage hardware, software and high speed internet connection. Also there is very limited qualified ICT staff and there is no an official ICT policy adopted by these universities.

In Somaliland universities Investing in ICT for learning could be perceived as an additional cost, and sustaining meaningful ICT utilization is a problem faced by many universities, particularly those that rely on donor funding. ICT may not feature high on the list of education institutions' investments or priorities when compared to important items like paying staff salaries or maintaining utilities. There is also a lack of Somaliland government funding for ODL and e-learning, and these

initiatives rely mostly on donor funding. Somaliland universities face the serious challenge of affordable and accessible telecommunication backbone and stable electricity supply. This lack of affordable and accessible telecommunication backbone and a stable electrical supply impacts on the rollout of ICT in Education and development initiatives.. Somaliland Ministry Education (2008) revealed that the universities, differences in the status of infrastructure (and donor interventions and the level of economic development) have led to different levels of ICT adoption. At most Somaliland universities, the underlying infrastructure is inadequate to support high bandwidth intensive applications in distance education.

According to the above situation, this study examined ICT resource availability and distance education in selected universities in Somaliland.

### **Purpose of the Study**

This study was intended to test the hypothesis of no significant relationship between ICT resource availability and distanced education: to validate the learning theory of Transactional Distance which refers to the theory of cognitive space between instructors and learners in an educational setting, especially in distance education formulated by Michael Moore. Also to generate new knowledge based on the findings in this study and to bridge the gap identified in previous studies.

## **Research Objectives**

### **General objective**

This study investigated the relationship between ICT resource availability and distance education in selected universities in Somaliland.

### **Specific objectives**

The specific objectives were:

1. To identify the demographic characteristics of the respondents in terms of:
  - 1.1 Gender
  - 1.2 Age
  - 1.3 Qualifications under the ICT discipline
  - 1.4 Qualifications other than the ICT discipline
  - 1.5 Number of years in distance education field
2. To determine the level of ICT resource availability in selected universities in Somaliland.
3. To determine the extent of distance education in Somaliland Universities
4. To establish if there is a significant relationship between the level of ICT resource availability and the extent of distance education.

## **Research Questions**

This study answered the following research questions:

1. What were the demographic characteristics of the respondents as to:
  - 1.1 Gender?
  - 1.2 Age?
  - 1.3 Qualifications under the ICT discipline?
  - 1.4 Qualifications other than the ICT discipline?
  - 1.5 Number of years in D.E field?
2. What was the level of ICT resource availability in selected universities in Somaliland?
3. What was extent of the distance education selected universities in Somaliland?
4. Were there any significant relationship between the level of ICT resource availability and the extent of distance education?

## **Study Hypothesis**

The study tested the hypotheses that:

H<sub>0</sub>: There is no significant relationship between ICT resource availability and distance education in selected universities in Somaliland.

## **Scope of the Study**

### **Content scope**

The study concentrated on the availability of ICT infrastructure and the distance education in Somaliland Universities.

### **Theoretical Scope**

The study was to validate the learning theory of Transactional Distance developed by Moore (1980), which refers to the theory of cognitive space between instructors and learners in an educational setting; especially in distance education that occurs between teachers and learners in an environment having the special characteristic of separation of teachers from learners.

### **Time scope**

The study was carried out the period 2011 to 2013 the time the universities in Somaliland were implementing their plans which involved an element of enhancing distance education using ICT.

### **Significance of the Study**

The following discipline benefited from the findings of the study.

The distance education programs **Facilitators** of the selected universities identified the roles available ICT resource play in delivering the Distance education courses.

The **universities management** aimed at achieving the Distance education goals; allocating appropriate available ICT resource to promote

the effectiveness of distance programs and giving ICT related skills to their staffs.

The **Ministry of Education** were justifiably allocated and distribute educational ICT facilities in universities to generate the needed skilled manpower and the findings of this study will help this body to generate the standardized ICT policy which may increase the effectiveness of higher education programs, specifically the areas of Distance education.

The **future researchers** utilized the findings of this study to attempt a related study.

## **Operational Definitions of Key Terms**

**Information Communication Technology Resource Availability:** in this study it is referred, as the combination of access to ICT resource and usage of ICT resource.

**Distance education:** in this study, it is a kind of learning system where lecturers and students are separated from each other, they communicate via ICT and this learning takes place remotely not on campus and it needs special instructional and administrative arrangements.



## **CHAPTER TWO**

### **REVIEW OF THE RELATED LITERATURE**

#### **Concepts, Ideas, Opinions from Authors/Experts**

##### **ICT in Education**

ICT refers to the new technologies that have resulted from the convergence of telecommunication networks and personal computer technology. ICT has the capacity to reach across the globe to those connected to global networks, and particularly, the Internet, which is defined as an "inter-network of computer networks" (Collis 1996,) Since ICT is used for communication, and for the creation, dissemination, storage and management of information, both of which are central to education, ICT is making a huge impact on education (Blurton 1999). It supports synchronous and asynchronous communication and thus, a range of educational applications such as video broadcast, video conferencing, audio conferencing, computer conferencing, text chat, audio graphics, discussion boards and email. In the case of distance education, ICT enables teaching, learning and administration of courses. It enables distance learners to participate in class in real time, access remote information, and interact with their instructor and peers at their own time, place and pace.

The author posited that ICT is simply about sharing and having access to data with ease. It is regarded as the super highway through which information is transmitted and shared by people all over the world. Ozoji in Jimoh (2007) defined ICT as the handling and processing of information (texts, images, graphs, instruction etc) for use, by means of electronic and communication devices such as computers, cameras, telephone. Ofodu (2007) also refer to ICT as electronic or computerized devices, assisted by human and interactive materials that can be used for a wide range of teaching and learning as well as for personal use. From these definitions, ICT could therefore be defined as processing and sharing of information using all kinds of electronic device, an umbrella that includes all technologies for the manipulation and communication of information. The field of education has certainly been affected by the penetrating influence of ICT worldwide and in particular developed countries; ICT has made a very profound and remarkable impact on the quality and quantity of teaching, learning research in the educational institutions.

Stressing the importance of the use of ICT in schools, Olurunsola (2007) posited that through ICT, educational needs have been met; it changes the needs of education as well as the potential processes. Message can be communicated through the e-mail, telex or telephones particularly the mobile ones. The pervasiveness of ICT has brought about rapid teleological, social, political and economic transformation, which has eventuated in a network society organized around ICT (Yusuf, 2005). The

author posited that ICT is an indispensable part of educational administration as its application makes institutions more efficient and productive, thereby engendering a variety of tools to enhance and facilitate teachers' pedagogical activities. For instance, e-learning is becoming one of the most common means of using ICT to provide education to students both on and off campus by means of teaching online offered via web-based systems. Looking at the role of education in nation building and the population explosion in the higher education these days, the use of ICT in the teaching-learning process becomes imperative.

This is true because its adoption by the teachers will enhance effective teaching. Such issues like good course organization, effective class management, content creation, self-assessment, self-study collaborative learning, task oriented activities, and effective communication between the actors of teaching learning process and research activities will be enhanced by the use of ICT based technology. Teaching and learning has gone beyond the teacher standing in front of a group of students and disseminating information to them without the students' adequate participation (Ajayi, 2008). The author posited that with the aid of ICT, teachers can take students beyond traditional limits, ensure their adequate participation in teaching and learning process and create vital environments to experiment and explore. The various ICT facilities used in the teaching learning process in schools according to Babajide and Bolaji (2003), Bryers (2004), Bandele (2006) and Ofodu (2007) include; radio, television, computers, overhead projectors, optical fibers, fax machines, CD-Rom, Internet, electronic notice board, slides, digital multimedia, video/ VCD machine and so on. It appears some of the

facilities are not sufficiently provided for teaching – learning process in the secondary schools.

The steady evolution of ICT (radio, television, interactive video, electronic mail, world-wide web) has considerably influenced the development of distance learning (Jones & Knezek, 1995). The first generation of distance learning, using traditional printed material and communication via post and telephone, was superseded by second generation audio recordings, radio and television broadcasts (Southworth et al. 1981). Both first and second generation distance learning delivery systems were designed primarily to produce and distribute learning materials as efficiently as the technology of the day permitted without any attention to the lack of interactive communication between students and teachers. As a result of the development of enhanced third generation distance learning systems which include interactive video, email, and world-wide web technologies, learning activity has been redefined to include teacher–student interaction (Katz, 1998; 2000; Trentin, 1997).

Interactive video–conferencing or interaction by way of online Internet-based instructional and learning packages offer one-to-many tuition in which teachers and students are able to communicate synchronously thereby solving instructional and learning problems in real time (Becker, 1984). Third generation distance learning is flexible, and allows teachers to continuously monitor overall progress of students as well as permitting tutors to modify, reinforce and even model educational processes, thereby meeting the cognitive needs and requirements of students (Wilson & Whitelock, 1997).

## **Effectiveness of distance education**

Although there has been a recent explosion of distance education , particularly due to the new information communication technologies available, the origin of Distance education can be traced back to over 100 years ago (Hanson et al, 1997; Meyer, 2002; Birnbaum, 2001, Mehrotra et al, 2001). According to Moore (1990), distance education, referred to in Moore's writing as correspondence study, began in the late 1800's. Correspondence study was developed in Germany by two researchers named Charles Toussaint and Gustav Langenscheidt, who were both language teachers in Berlin (Watkins, 1991). Another pioneer of distance education is Englishman, Isaac Pitman. He taught shorthand via correspondence study in England in the 1840's (Verduin & Clark, 1991).

The concept of correspondence study made its way to the United States in 1873, when Anna Eliot Ticknor founded a Bostonbased society named The Society to Encourage Studies at Home. Within 24 years, this society had attracted approximately 10,000 students (Watkins, 1991). The state of New York authorized academic degrees through the Chautauqua College of Liberal Arts from 1883-1891 to students completing the required correspondence courses. Support for the new educational method is apparent in Yale Professor William Rainey's comments about correspondence study [distance education].

The student who has prepared a certain number of lessons in the correspondence school knows more of the subject treated in those lessons, and knows it better, than the student who has covered the same

ground in the classroom. The day is coming when the work done by correspondence will be greater in amount than that done in the classrooms of our academies and colleges; when the student who shall recite by correspondence will far outnumber those who make oral recitations (Watkins).

Since the early 1900's, distance education has been incorporated into the practices of many institutions, as has the travelling of faculty to meet students off campus to conduct educational instruction (Moore, 1990). According to Meyer (2002), in order to help alleviate the demands of travel for faculty and students, institutions began utilizing available technologies, such as audio connections (i.e. telephones), videotapes, and television, to conduct distance education efforts. These types of delivery methods and media continued to be used, as distance education began to grow as a form of education. Beginning in the 1980's, satellite telecommunications used to transmit broadcasting of lectures and instruction to off-campus locations became a popular way to conduct distance education. From the late 1980's to the 1990's, microwave-based interactive video was utilized, and this method of educational delivery was used until land-based interactive video was developed and used in the late 1990's. When the Internet and the World Wide Web became available, "a growing comprehension that education need not be site or time-bound" began to develop throughout university and college settings.

As noted by Meyer (2002), research conducted by the National Centre for Education Statistics (1999) indicated that higher education institutions offering Distance education courses from Fall 1995 to

academic year 1997-98 increased from 33 percent to 44 percent. Seventy-two percent of two-year public institutions and 79% of four-year institutions offered Distance education courses.

Within the same time period, the study reported that the number of degree or certificate programs and courses doubled from 860 to 1,520 programs and from 25,730 to 52,270 courses. Student enrolment experienced a two-fold increase, from 753,640 to 1.6 million. Additionally, Internet use increased to 60% of institutions during 1997-1998. Meyer's (2002) analysis of the study indicated that "this doubling of effort (courses and programs) and student response from 1995 to 1997-1998 is a tribute to institutional entrepreneurialism, even though at times the demand for and potential seen for Web-based Distance education outpaced what higher education could currently provide".

Another study that reveals the increase in Distance education course offerings in higher education was conducted by Green (2001), and the results of this project, entitled The Campus Computing Project: 2001 Results in Claremont, CA, indicated that during the time of the study, 55% of college campuses provided web-based course registration and 56% offered courses that are taught completely online. The increasing percentages of Distance education offerings indicate that the support of Distance education from institutions of higher education has only increased from year to year. Support for Distance education goes well beyond the university/college setting. According to Mingle's (1998) report entitled, New Technology Funds: Problem or Solution, in 1996-1997,

legislatures appropriated over \$370 million to technology applications in higher education.

In a report by the National Education Association (1997) entitled, *Going the Distance: State Legislative Leaders Talk about Higher Education and Technology*, state legislatures indicate their support for Distance education to help improve access, student learning, cost of higher education, and productivity of administration and faculty efficiency. In 1999, the National Governor's Association published *Transforming Learning through Technology*, and in 2001, the association developed two additional reports on the use of technology in postsecondary education and in the workforce, which provided information on how governors can benefit from investing in technology applications in the educational and worksite settings (National Governor's Association, 1999, 2001a, 2001b.).

Lastly, in a U.S. Department of Education Agenda Project (2000), ideas on how to improve the Higher Education Act was contemplated, and within this report, Distance education was given high priority and the importance of department support in adopting the ideas surrounding Distance education was emphasized. As noted by Meyer (2002), "the support of the federal government has been essential in the effort to revise current regulations to remove barriers to new forms of Distance education and to extend federal benefits (i.e. student aid) to Distance education students," although this role is more constrained than the state government role.



## **Theoretical Perspectives**

Transactional Distance refers to the theory of cognitive space between instructors and learners in an educational setting, especially in distance education formulated by Michael Moore at University of Wisconsin-Madison. Moore's theory was originally part of a theory of independent learning developed in 1972, which appeared in the Handbook of Adult Education as "transactional distance" in 1980. According to Moore, transactional distance is "a psychological and communication space to be crossed, a space of potential misunderstanding between the inputs of instructor and those of the learner".

There are three key interactive components that have to work together to shorten the transactional distance and provide for a meaningful learning experience:

- Dialog, or interaction between learners and teachers
- Structure of the instructional programs
- Autonomy, or the degree of self-directedness of the learner.

In distance education, students and instructors experience a sense of separation that is caused by more than the simple physical distance between students and instructors. Transactional distance is "a psychological and communications gap, a space of potential misunderstanding between the inputs of instructor and those of the learner" created in part by the physical distance inherent to online learning (Moore 1991, "Transactional Distance. A large transactional distance—such as that between geographically dispersed learners and instructors in an asynchronous, text-based, online learning environment—

may contribute to students' feelings of isolation and disconnectedness, which can lead to reduced levels of motivation and engagement and, consequently, attrition. The transaction that we call distance education occurs between teachers and learners in an environment having the special characteristic of separation of teachers from learners. It is a distance of understandings and perceptions that might lead to a communication gap or a psychological space of potential misunderstandings between people. In particular, the content of the term "transactional distance" was determined with more definition and accuracy, while the Theory of Transactional Distance was elaborated and developed by Farhad Saba and Rick L. Shearer (1994), Yau-Jane Chen and Fern K. Willits (1998), Yau-Jane Chen (2001a; 2001b), Karen Lemone (2005) and Sushita Gokool-Ramdoo (2008). In its complete form, the theory appears in 1993 (Moore, 1993). When designing e-learning experiences, instructors must consider two variables that affect transactional distance: structure and dialogue. Structure refers to the flexibility or rigidity of the instructional methods and strategies used in an e-learning experience. Dialogue refers to the interaction between the instructor and learner during an e-learning experience

## **Related Studies**

### **Level of ICT resource Availability**

Evidently, the last two decades have witnessed considerable growth in education. This unprecedented phenomenon can be attributed to the globalization of open and distance education through the application of ICTs. In this vein, Moore and Tait (2002), remark that open and distance learning is one of the most rapidly growing fields of education, and its potential impact on all education delivery systems has been greatly accentuated through the development of ICT-based technologies, and in particular the World Wide Web. In the study ICT resource availability is measured the combination of ICT resource usage and Access to ICT resources as follows

#### **ICT resource usage**

According to Meadowcroft (2006) ICT resource is used to store, manipulate, distribute or create information in distance education. It is also the tool that we use to perform calculations, to store, and manipulate text, and to communicate. Marzelle (2002) states that ICTs are both traditional (such as radio, television, dance, drama folklore, print and fax) and new devices such as the Internet, the World Wide Web, electronic mail, teleconferencing, and distance learning tools such as CD-ROMS, hypertext, ipod , virtual classroom etc.

Information and Communication Technologies (ICTs) are electronic and non-electronic technologies, infrastructure, systems, and services used to publish, store, retrieve, and transmit information, to communicate ideas, and to generate knowledge (Mejiuni and Obilade, 2006). World Bank (2002) defines ICTs as the convergence of activities that facilitates capturing, processing, transmission and display of information through digital electronic devices, telecommunication, internet, world wide web, virtual realities and cyber space. According these scholars, the potential of ICTs in providing equitable access to distance education is a fact that is widely accepted by all. It has provided viable platform for generation, adoption and exploitation of knowledge through open and distance education. Information and Communication Technologies (ICTs) perceived in this way can give a boost to open and distance learning. There is no gainsaying the importance of ICT resource to open and distance learning. ICTs guarantee the inalienable access of the individual to distance education.

## **Access to ICT resource**

Accessible ICT hardware and software must first be produced if it is to be used by distance education providers and consumers. These products must be made available in distance education settings at a non-prohibitive cost. Increased education of consumers on the use of these new ICT products is then necessary. Having accessible products available for use drives the delivery of accessible distance education. According to Moore (2002) this ICT resource can be accessible for capturing, processing, transmission and display of information through digital electronic devices, telecommunication, internet, World Wide Web to disseminate the distance courses. Readily available accessible hardware and software opens the doors to delivery of accessible distance education content. Such content must be designed to be universally accessible using the technologies provided. Again, accessibility knowledge via ICT resource is necessary for the design, development, and delivery of natively accessible content.

## **The extent of distance education**

### **Course of program inputs**

According to Moore (2003), of great interest to those responsible for funding distance course or program development is the identification of resources required to do so. Budgetary information can be helpful in terms of delineating monetary allocations for equipment, personnel costs for instructional development const, and so on. Combined with programmatic data, such as the number of students served, input data

can demonstrate cost efficiency and sustainability to university-level personnel, as well as to accrediting agencies interested in those factors.

## **Outcomes**

Analysis of course of program outcomes changes that occur as a result of the instructional experience is another common evaluation target. This category encompasses performance attitudes, and programmatic outcomes.

**Performance outcomes:** Performance measurements generally represent the most common type of data collected for summative distance course and program evaluations. A posttest or project usually measures expected learning outcomes, with assessment items referenced to specific course objectives. Unfortunately, a popular strategy for assessing distance students performance is to compare the learning outcomes of distance students to those learners in the same class on campus. Such comparisons ignore the many factors that influence learning and falsely attribute success (or failure) to the distance delivery medium. Instead of comparing groups on and off campus, student achievement analysis can go to the heart of the issue (and be more effective) by determining whether or not distance students learn what the course is designed to teach.

**Attitudes:** In additions to positive leaning outcomes from a distance course or program, education providers likely hope that their instructional efforts produce positive attitudes among participants about the courses, the distance experience, and the host institutions therefore, learner attitude constitute another type of data generally collected for summative distance education evaluations. Interest, motivation, and attitudes towards participating in the learning experience are useful measurements. Data on expected and unexpected attitudes of the learners could be collected through self-administered or interviewer-administered questionnaires, open-ended interviews, observations, and focus groups, sample items might include; measuring unexpected attitudinal effects can provide insightful information. Surveys could include items like, compared to other online courses, this was one of my favorites, a positive response in this case is gratifying, but not necessarily expected Hashim, R. (2004).

### **Implementation concerns.**

Perhaps the broadest area of summative evaluation concerns evaluating the implementation of distance courses and programs. The process of distance education has a variety of stakeholders, form students to faculty to support personnel to the host institutions itself. Some implementation concerns are shared by all stakeholders, such as the reliability of the delivery technology and the accessibility and effectiveness of the student support services. Other concerns are specific to individual stakeholders. For example, distance learners must understand the

distance environment and be prepared to engage in self-directed learning. Also, distance learners should clearly understand faculty expectations and know who to contract for technological and instructional needs. Regarding faculty concerns, their preparedness to teach in distance settings is important, while accessibility to appropriate professional development activity is essential. These factors, as well as incentives and rewards for teaching at a distance, are very real issues that faculty face, hence worthy of evaluation.

Finally, education providers, such as institutions of higher education, are concerned with quality assurance, are our distance course and programs of strong quality and rigor? Do they meet our professional accreditation criteria? These questions can also be answered within a summative evaluation effort.

### **ICT and effectiveness of distance education**

ICT is viewed as a factor that can promote quality distance education. (Johnson, 2007) points out that communication is a fundamental act of the education process. Hence, to enhance quality in open and distance learning, proper attention must be given to information and communication technology. In education, ICT can be viewed as the application of digital equipment to all aspects of teaching and learning. It involves a combination of technologies for collecting, storing, processing, communicating and delivering of information related to teaching and learning processes..



Belanger and Jordon (2000) noted that Beginning in the middle of the 20th century and continuing today, television began playing a role in providing Distance education courses and programs. For example, the Public Broadcasting Service (PBS) presents courses that are taken by students in over 2,000 U.S. institutions (Belanger and Jordon, 2000) The continued and growing need for remote access to learning opportunities, linked with newer information systems and communication technologies, especially the use of the World Wide Web, has now pushed Distance education into the center of the discussion of educational practice in higher education. (U.S. Department of Education, National Centre for Education Statistics, 1997-98) According to a report by International Data Corporation, in 2002 approximately 85 percent of two and four year colleges are now offering Distance education courses. Student enrolments are estimated to be over 2.2 million students, or 15 percent of all higher education students, (Heterick and Twigg, 2002).

Some teachers lack a coherent understanding of Distance education practice and the full range of instructional design possibilities available to them in a Distance education environment to achieve desired outcomes (Instructional Design for Interactive Distance education, 1997). Some major DE initiatives emphasize educational issues only when related to fiscal implications (i.e. cost savings) of Distance education efforts (Andrew W. Mellon Foundation, 1998, Twigg, 1999, Taylor, Parker, and Tebeaux, 2001, Robinson, 2001, Rivard, 2001, Morgan, 2001). For Educators have an unprecedented opportunity to provide leadership and direction in helping to make sense of the confused DE environment. The challenge is to appropriately respond to DE driven educational changes

that Armstrong has called both "sustaining" and "disruptive," by explaining and anticipating Distance education practices for a broad range of emerging educational purposes and experiences (Armstrong, 2000).

There are general ICT competencies, common to all uses, regardless of the subject area. Training and professional development will need to focus upon these competencies as teachers' technical confidence and competence grows and as they seek ways to improve their teaching. Examples of general teacher competencies include the following: Ability to decide why, when, where, and how ICT tools will contribute to teaching objectives, and how to choose from among a range of ICT tools those that are most appropriate to stimulate pupils' learning, that is:

- Choose ICT tools and pedagogy from those recommended for specific subjects;
- Explain the reasons for choosing particular ICT tools and pedagogy;
- Emphasize the content of students' productions;
- Plan a whole lesson sequence, deciding in advance when and how ICT will best be used. Ability to manage a class-based learning environment using team work to achieve teaching objectives, that is:
  - Be able to describe difficulties in using ICT to achieve planned lesson objectives;
  - Understand differences between pupils according to their competencies in using ICT;

- Have available strategies to manage such differences in the course of teaching. Ability to decide when whole class or group multimedia presentations will be useful, that is:
- Vary the kind of presentation or lesson materials according to the main goals and the teaching method;
- Analyze a presentation for legibility, structure, coherence with objectives, and suitability for students. Ability to analyze subject specific multimedia educational software, that is:
- Evaluate CD-ROMs, web sites, video and audio, courseware;
- Assess activities proposed for learners and the contribution of these to lesson objectives;
- Analyze the specific contribution of ICT tools to individual students' learning.

Ability to assist students to find, compares, and analyzes information from the Internet, and from other sources specific to a subject area, that is:

- Teach students to construct simple searches;
- Help students to manage, to criticize, to synthesize and to present information using ICT tools.

Ability to select and use appropriate tools to communicate, according to teachers' own objectives, with colleagues or with fellow students, that is:

- Assess communication tools to use teaching situations to facilitate collaboration.

Ability to use ICT more efficiently, choosing training sessions and participating in new developments in order to enhance professional development, that is:

- Participate and be active in groups working on the use of ICT;
- Use ICT tools (forums, conferencing, bulletin boards, and email) to collaborate in the improvement of teaching and learning and in the management of learning processes.

According to Ajayi (2008), the use of these facilities, involves various method which include systematized feedback system computer-based operation/network, video conferencing and audio conferencing, internet/ worldwide websites and computer assisted instruction. It must however be stressed that the effective use of the various method of the ICT in teaching leaning depends on the availability of these facilities and teachers' competence in using them. Observation has shown that there are no functional internet facilities in most of the distance learning centers. This appears to hinder the extent of teachers' exposure to the use of ICT in teaching. Teachers as well as students appear not to be knowledgeable in the use of ICT because there appears not to be any official training for both the teachers and the students in the university.

Access to information through ICT is the amount of information accessible to individuals to support them in trying new strategies, thinking and creativity that are reflective in practice aimed at engaging them to new innovations through the use of ICTs (Ololube, In press). Information and communication technologies (ICTs) are indispensable and have been

accepted as part of the contemporary world especially in the industrialized societies. In fact, cultures and societies are adjusted to meet the challenges of the knowledge age. The pervasiveness of ICT has brought about rapid changes in technology, social, political, and global economic transformation (Nwachukwu, 1994; Yusuf, 2005). As such, every nation invests heavily in higher education because it can produce unquantifiable benefits for individuals, organizations and the society as a whole.

Education is provided through formal and informal means. In formal settings the conventional (face-to-face instruction) and Distance education (offered with separation in terms of physical location of instructors and students) have been used to provide educational opportunities to recipients. Open and Distance education though not new in Nigeria has been given much prominence of recent.

The integration of information and communication technologies can help revitalize 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. Teachers' attitudes are major predictors of the use of new technologies in instructional settings. Teachers' attitudes toward ICT shape not only their own ICT experiences, but also the experiences of the students they teach.

### **Economic Factors of ICT in distance Education**

In distance education, cost is an important factor that guides the adoption and growth of communication technology in a country. The democratic society continuously requires qualified and competent citizens. Even most developed countries cannot allocate sufficient amount of their budget for meeting the increasing demand in education. According to Moore (2003), a series of studies of experts from Europe showed that the costs of distance education are almost twice cheaper than the traditional one. Therefore, the modern society needs a lifelong education for its citizens that could be performed through the distance education system.

Developing countries often lack the initial allocation as well as matching funds to make feasible investments in ICTs. Many countries often acquire costly technology without making provisions for building sufficient infrastructure to run them. Most developing countries are constrained by resource scarcities. Even where the importance of ICTs is recognized, allocation for the development of these is at best paltry. Due to this, many developing countries are forced to depend on mostly traditional means of communication. These are limited in their efficiency.

The Developing countries are vitally dependent on substantial foreign assistance to ensure the development of ICTs. Often it is found that it is very difficult to invite the attention of donors on ICTs. These countries are perennially short of Foreign Exchange for acquiring latest technologies. Cost-efficiency of an ICT is another major factor that is important that determines its growth. Developing countries have to ensure that such a technology is adopted that is easily accessible to the target group and also fulfills all the functions that are expected of it. Such

a scenario essentially implies that a costly technology need not always be the best technology. However, it is often seen that Developing Countries often invest in the latest technologies without considering whether the target audience is effectively reached or whether the target audience is interested in the technology.

Economic factors also affect the application of new ICT in distance education. Developing countries have a constant paucity of funds especially for the application of new ICT in distance education. Like other Somaliland public universities, (Somaliland Ministry of Education Report 2009) Amoud University and University of Hageisa and their distance education branch, they are financed by themselves with very little amount of it from government and international humanitarian originations. All academicians and administrators' salaries are paid through universities funds. Expenditures for both universities operations including printing books, television and radio productions, mailing, examination costs, administrative costs and salaries come from these universities' operating budget. Revenues to the universities come from very little government allocations and student fees. Although the percent from each of these areas can vary from year to year, the majority of the income comes from the students fees.

The perceptions and attitudes of Somaliland political system greatly affect the acceptance and growth of distance education technology. It is obvious that the attitude of Somaliland policy makers is a very important factor that can affect the growth of communication technologies of distance education in Somaliland.

## CHAPTER THREE

### METHODOLOGY

#### Research Design

This study employed the *descriptive correlational* strategies. Descriptive studies are *non-experimental* researches that describe the characteristics of a particular individual, or of a group. It deals with the relationship between variables, testing of hypothesis and development of generalizations and use of theories that have universal validity. Furthermore, descriptive correlation is used to discover causal relationships (descriptive correlational), differences (descriptive comparative), to provide precise *quantitative* description and to observe behavior.

#### Research Population

The target population was the administration staff, and lecturers of the distance education departments of selected universities, including 40 Managers/Administrators, 95 lecturers and 30 Distance education supervisors of Universities of Hargeisa and Amoud University. These universities will be chosen because these institutions are located in Somaliland and they have fully-fledged distance education departments with number of students.



## Sample size

In view of the nature of the target population, a sample size was consisted of one hundred and seventeen (117) subjects selected from administration staff and lecturers of the selected two universities in Somaliland.

Table 1 below showed the respondents and their details.

The Sloven's formula is used to determine the minimum sample size.

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

Category	Total target population			Sample size		
Universities	Top Mgt	Supervisors	Lecturers	Top Mgt	supervisors	Lecturers
University Of Hargiesa	15	15	45	11	11	32
Amoud University	25	15	50	17	11	35
<b>Total</b>	40	<b>30</b>	<b>95</b>	<b>28</b>	22	<b>67</b>
<b>Grand Total</b>	<b>165</b>			<b>117</b>		

## **Sampling Procedure**

This study used qualitative methodology. Purposive sampling technique was used to select the respondents. The study population was confined to two public universities in Somaliland and was composed of 117 qualified experienced lecturers in distance education departments. In the study the purposive sampling was relied on the judgment of the researcher when he selected the units that were to be studied. Usually, the sample being investigated was quite small, especially when compared with probability sampling techniques. In Somaliland there are only 7 universities. The main reason that the purposive sampling was focused on particular characteristics of a population that were of interest at both universities, which was best enabled the researcher to answer the research questions.

## **Research Instrument**

The instrument that the study used was questionnaire. The main reason that the researcher administered questionnaire was that the respondents gave only the answers that the researcher intended to get without irrelevant information. In addition to this, the structure of the questionnaire begun with an introduction, which explained the purpose of the survey and gave instruction to the respondents, and then the questions that related to the study went behind. The research instrument of this study was included: Face Sheet and questionnaires for independent and dependant variables.

## **Validity and reliability**

### **Validity**

To establish validity, the instrument was given two experts to evaluate the relevance of each item in the instruments to the objectives of the study. The experts indicated from KIU (Dr. Kibuuba and Dr. Sofia), whether these items were relevant to the objectives of the study. The experts rated each item on the scale: Relevant and not relevant. Validity will determine using content validity index (C.V.I) using the formula:

$$\text{CVI} = \frac{\text{No of items declared valid}}{\text{Total no of items}}$$

The content validity index of this instrument was 0.784, refer further calculations of CVI on appendix IV.

### **Reliability**

The reliability of this research was checked by test and retest approach, this test and retest approach was self administrating, the researcher sent small number of people and then after two weeks the researcher sent another same number of people then the differences of these two groups were very few.

## **Data Gathering Procedures**

### **Before the administration of the questionnaires**

1. An introduction letter was obtained from the College Higher Degrees and Research for the researcher to solicit approval to conduct the study from respective administrators of the selected universities.
2. After approved, the researcher was secured a list of the qualified respondents from the universities administrators and select through systematic random sampling from this list to arrive at the minimum sample size.
3. The respondents were explained about the study and will be requested to sign the Informed Consent Form (Appendix III).
4. The researchers reproduced more than enough questionnaires for distribution.
5. And selected research assistants who assisted in the data collection; briefed and oriented them in order to be consistent in administering the questionnaires.

### **During the administration of the questionnaires**

6. The respondents were requested to answer completely and not to leave any part of the questionnaires unanswered.
7. The researcher and assistants emphasized retrieval of the questionnaires within five days from the date of distribution.
8. After retrieval, all returned questionnaires were checked if all are answered.

## Data analysis

### A. ICT Resource Availability

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly agree	Very high
2.51-3.25	Agree	High
1.76-2.50	Disagree	Low
1.00-1.75	Strongly disagree	Very low

### B. Extent of Distance Education

Mean Range	Response Mode	Interpretation
3.26-4.00	Strongly agree	Very high
2.51-3.25	Agree	High
1.76-2.50	Disagree	Low
1.00-1.75	Strongly disagree	Very low

The researcher used frequency and percentage for demographic background on the respondents. Mean statistics was used to present the study findings on each variable items of which a mean result of 4 was considered very high, 3= high, 2 = low and 1= very low. Pearson's correlation coefficient was used to analyze the relationship between the ICT and effectiveness of distance education in the selected universities in Somaliland. A correlation is statistical technique that enables the

researcher to measure the relationship between the variables under study. A regression analysis using ANOVA were used to test the extent to which the availability of ICT has influenced the effectiveness of distance education in the selected universities in Somaliland.

### **Ethical consideration**

The study carried out with the permission of the respondent. It was reserved as confidential and for not revealed any names of the respondent. The research was used professional and ethical standards to plan collect and process data. I as a researcher used the objective method of data collection. This study was free from any individual bias by using in favor of well systematic and objective measures.

The methodology was chosen on the basis of research objectives and for any other reasons. the researcher did ensure that he recognize the bounders of competence in selection of methodology and the researcher also made sure that he/she use the only those techniques for which he was qualified by education, training and experience. Finally I assured that the data was collected on acceptable research standards which make sure that participants were prevented by any sides.

## Limitations of the Study

In view of the following threats to validity, the researcher had claimed an allowable 5% margin of error. Measures were also indicated in order to minimize if not to eradicate the threats to the validity of the findings of this study.

1. ***Extraneous variables*** which were beyond the researcher's control such as respondents' honesty, personal biases and uncontrolled setting of the study.
2. ***Instrumentation:*** The research instruments on ICT resource availability are not standardized. Therefore a validity and reliability test were done to produce a credible measurement of the research variables.
3. ***Testing:*** The use of research assistants can bring about inconsistency in the administration of the questionnaires in terms of time of administration, understanding of the items in the questionnaires and explanations given to the respondents. To minimize this threat, the research assistants were oriented and briefed on the procedures to be done in data collection.
4. ***Attrition/Mortality:*** Not all questionnaires were returned completely answered nor even retrieved back due to circumstances on the part of the respondents such as travels sickness, hospitalization and refusal/withdrawal to participate. In anticipation to this, the researcher reserved more respondents by exceeding the minimum sample size. The

respondents were also reminded not to leave any item in the questionnaires unanswered and will be closely followed up as to the date of retrieval.



## **CHAPTER FOUR**

### **PRESENTATION, ANALYSIS AND INTERPRETATION OF DATA**

#### **INTRODUCTION**

This chapter presents the presentation of data, analysis, and interpretation. The data analysis and interpretation was based on the research questions as well as research objectives, the presentation is divided in to two parts. The first part presents the respondents profile or demographic information, while the second part deals with presentation, interpretation, and analysis of the research questions and objectives. Below are the data presentations and analysis of research findings.

#### **Demographic information of the respondents**

This part presents the background information of the respondents who participated in the study. The purpose of this background information was to find out the characteristics of the respondents and show the distribution of the population in the study.

In addition to that, the first objective of this study was to determine the profile of respondents such as Age, Gender, qualification and experience to examine what category the majority of the respondents are fit in. Data on this objective was analyzed under the question "What is the profile of the respondents as to Age, Gender, Educational level and years of experience?"

**Table 2**  
**Profile of the respondents**  
**n=117**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Male	83	70.9
Female	34	29.1
<b>Total</b>	<b>117</b>	<b>100</b>
<b>Age</b>		
20-29	21	17.9
30-39	60	51.3
40-59	35	29.9
50+	1	9
<b>Total</b>	<b>117</b>	<b>100</b>
<b>Qualification</b>		
Diploma	14	12.0
Bachelor	35	29.9
Master	58	49.6
Ph.D	10	8.5
<b>Total</b>	<b>117</b>	<b>100</b>
<b>Experience</b>		
Less than 1yr	7	6.0
1-2 yrs	71	60.7
3-4 yrs	32	27.4
5-6 yrs	5	4.3
More than 7 yrs	2	1.7
<b>Total</b>	<b>117</b>	<b>100</b>

Source: primary data, 2013

Results from tables 2 indicated that there were more male (70.9%) than female (29.1%). This implies that all the workers in these two universities were dominated by males or majority of the respondents were male.

The findings of the study showed that 17.9% of the respondents were at the ages between from 20 to 29 years, while 51.3% were between 30-39 years, 29.9% of the respondents were the ages between 30-39 and finally 9% of the respondents were the ages from 50yrs and above. This means that the majority of the small business owners were the ages from 20 to 29 years because these ages are most productive and educated people in Somaliland.

In the case of their educational background, 49.6% of the respondents were at masters' degree, the second group of the respondents was bachelor level which stands for 21.3%, while Diploma education level was 12.0% and the last group was Ph.D educational level represented 8.5% of the respondents.

The number of years that respondents had been working from a year to 2 years was 60.7%, while 27.4.0% of the respondents had been working from 3 years to 4 years, 4.3% of the respondents had been working from 5 years to 6 years, while 6.0% of the respondents had less than one year experience and the last group of the respondents had more than 7 years which represented 1.7% of the respondents.

**Table 3**  
**Level of ICT resource availability**  
**n=117**

<b>Indicators</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Rank</b>
<b>Access to ICT Resource</b>			
You have access to printing material facilities when you need them for your distance education program in this university	3.66	Very high	1
You have access to personal computers in the university computer labs when you need them in your distance education program	3.55	Very high	2
access to telephone communications You have when you need them for distance education program	3.22	High	3
You have access interactive multimedia on computers for your distance education program	3.1	High	4
You have access to radio broadcast when you need them for your distance education program	3	High	5

**Level of ICT resource availability (continuation)**  
**n=117**

You have access internet-based course material for your distance education program	2.91	High	6
You have access to university wireless internet you need them for your distance education program	2.83	High	7
You have access to email system when you need them for your distance education program	2.71	High	8
You have access to video cassettes when you need them for your distance education program	2.56	High	9
You have access to television broadcasts when you need them for your distance education program	2.44	Low	10
<b>Average mean</b>	<b>3.00</b>	<b>High</b>	

**Level of ICT resource availability (continuation)**  
**n=117**

<b>ICT Resource usage</b>			
Email systems	3.26	Very high	1
Educational material CD-ROMS	3.21	High	2
Desktop publishing software	3.15	High	3
Internet based educational material	3.09	High	4
Printing facilities	3.03	High	5
Telephone communication	2.91	High	6
Constant power supply at our university	2.83	High	7
Personal computers	2.76	High	8
University wireless internet	2.67	High	9
Telephone broadcasts	2.61	High	10
Interactive multimedia on computers	2.57	High	11
Radio broadcasting	2.50	Low	12
Video cassettes	2.44	Low	13
<b>Average mean</b>	<b>2.85</b>	<b>High</b>	
<b>Index mean</b>	<b>2.92</b>	<b>High</b>	

Source: primary data, 2012

From the table 3 showed that the majority of the respondents agreed that they had access to printing in their distance education, this made clear that they attested by a very high mean score of 3.66 which indicated that the majority of the respondents agreed that they had access to printing for their distance learning activities.

Table 3 indicated that the most o these respondents agreed that they have access to personal computers in the university with aim of distance education. According to the mean o these responses (3.55 High) the universities staff had almost full access to the personal computers in these universities (Amoud and Hargeisa).

The table 3 indicated that the mean of 3.22 represents that they had access to telephone communications during distance learning activities. This mean showed that the majority of the respondents agreed that had access to telephone communications.

The table 3 indicated that the majority of respondents agreed that they had access to interactive multimedia on computers for your distance education program with the mean of 3.1. it means that universities staff had enough access to interactive multimedia on computers for distance education purposes.

Table 3 showed that the majority of the respondents that they had access to radio broadcast for their distance education with the mean of 3 (very high). This indicated that the majority of the university staff had access to these ICT equipments for distance education tasks.

Table 3 showed that the majority of respondents agreed that they had access internet-based course material for distance education with mean of 2.91. This reveals that the universities staff had almost full access to internet-based course material for distance education.

Table 3 indicated that most of the staff of Amoud University and University of Hargesia responded with the mean of (2.83 high), which means that they had strong access to university wireless internet during distance education delivery.

Table 3 showed that the majority of respondents agreed that they had access to email system for distance education with mean of 2.71. According to this result, the university staff had access to the email system for distance education tasks.

Table 3 indicated that the respondents agreed on mean of 2.56 that they had access to video cassettes for their distance education. It is clear that the most respondents had access to video cassettes for their distance education.

Table 3 showed that the respondents have quite access to television broadcasts for distance education purposes. With the mean of 2.44, the university staff agreed that they have less access to television broadcasts for offering distance education comparing to the access to radio broadcasting.

Table 3 showed that mean of responses on usage of email systems in distance education is 3.26 which indicated high usage of email systems in both universities. These universities staff uses email for communication



between them and correspondence among all related university stakeholder in distance education programs.

Table 3 indicated that universities staff agreed that they used Educational material CD-ROMS mostly as the mean of their usage 3.21 is high. These respondents clearly mention that they use Educational material CD-ROMS in distance education in both universities.

Table 3 showed that responses given to Desktop publishing software usage in distance education in both universities is strongly high (Mean= 3.15). In daily activities university staff utilize the desktop publishing software like Word-processing, Spreadsheet, Presentation and Database Management Software.

Table 3 indicated that the usage of Internet based educational material in distance education is high because the mean of responses is 3.09. The universities staff agreed that they use internet based education material in distance education programs, sometimes they google for lessen preparation, download pdf books, use it as knowledge sharing etc.

Table 3 showed that the majority respondents agreed on that they their usage of printing facilities was very high with mean of 3.03, it means that these universities' staff has nicely utilized the printing facilities or distance education aims.

Table 3 indicated that the majority of respondents agreed on that their usage of telephone communications was high. With mean of 2.91, it is obviously that usage of telephone communications was relatively high in distance education delivery in these universities.

Table 3 showed that respondents agreed they had constant power supply in universities with Mean of 2.83, in contrary this indicated that in distance department had some electricity power fluctuations.

Table 3 Showed that the respondents agreed they use personal computers in distance education averagely (Mean =2.76), obviously almost every office personal computers are available and used for educational activities and normally staff in distance education are equipped with computers to facilitate the distance education delivery process.

Table 3 indicated that most of respondents agreed that their usage of university wireless internet is high according to the (Mean=2.67), so the result of this analyses show that universities staff use the wireless internet for distance education activities.

Table 3 showed that the responses of universities staff indicated that they agreed that their usage of Telephone broadcasts is quite high because mean of 2.61. It mains that the usage of telephones in distance education programs by the universities staff are normally existed.

Table 3 revealed that majority respondents agreed that they use Interactive multimedia on computers in distance education, where their response average (Mean 2.57), this showed that universities staff mainly use interactive multimedia on computers as educational facilities.

Table 3 showed that majority of respondents agreed on that their usage of Radio broadcasting was low with mean of 2.50, which means they had not usage radio breasting mostly in distance education programs in both universities.

Table 3 indicated that the majority of respondents agreed on that their usage of Video cassettes was low with mean of 2.44. So the result of these responses indicated that universities staff didn't mainly use the video cassettes in distance education activities.

**Extent of the distance education program (continuation)**  
**n=117**

<b>Indicators</b>	<b>Mean</b>	<b>Interpretation</b>	<b>Rank</b>
<b>Course input</b>			
The required equipments for distance education are available in your university	3.69	Very high	1
The required support services for distance education are in a position for your University	2.96	High	2
Your university encourages lecturers to integrate technologies into the teaching process	2.92	High	3
The required qualified staffs for delivery of distance education are available in your University	2.91	High	4
Your university provides students with multiple communication options (telephone, internet, email) for assistance and contacting support services	2.72	High	5
Your university selects and uses the appropriate tools, technology and media in delivery of distance learning programs	2.71	High	6

**Extent of the distance education program (continuation)**  
**n=117**

The distance program equips the students with the useful skills and knowledge	2.61	High	7
The distance courses are well designed and delivered to achieve the expected learning outcomes (there is a good balance of Lectures, tutorials, practical etc.)	2.50	Low	8
The tuition fees of distance courses are reasonable in comparing with other regular courses.	2.21	Low	9
There is no difference in the teaching content between those on the distance education program and those on campus	1.98	Low	10
<b>Average mean</b>	<b>2.72</b>	<b>High</b>	
<b>Course implementation</b>			
The courses in distance learning have the required quality	3.37	High	1

**Extent of the distance education program (continuation)**  
**n=117**

The delivery technology (e.g. computers, internet, and data projectors) are very reliable to support students' needs	3.18	High	2
The distance learners are prepared to engage in self-directed learning	3.17	High	3
The support services (e. g. library services, admission services, financial aid, and advising) are accessible to the students	3.09	High	4
The distance learners clearly know who to contact for academic needs	2.97	High	5
The implementation of the distance program is involved by all stakeholders	2.95	High	6
The distance learners clearly understand the faculty expectations	2.93	High	7
The lecturers are prepared to design, develop, and teach distance courses	2.79	High	8

**Extent of the distance education program (continuation)**

**n=117**

The distance education courses in this university are well designed to suit the needs of distance learners	2.50	Low	9
The distance education courses offered your universities are accredited with professional bodies/agencies/institutions	2.48	Low	10
Incentives and reward are given to lecturers for teaching distance learning	2.37	Low	11
<b>Average mean</b>	<b>2.89</b>	<b>High</b>	
<b>Course outcomes</b>			
Your university provides adequate student support services such as library services, admission services, electricity, financial aid, and advising services	3.05	High	1
There is clear evaluation and assessment of instructional techniques, program design, and students' performance	2.97	High	2

**Extent of the distance education program (continuation)**  
**n=117**

The staff of the distance education program has a positive attitude towards the offering university	2.93	High	3
Your university provides appropriate levels of technical support via a range of technologies and over a broad range of times.	2.78	High	4
The delivery technology in this university is reliable in enabling you interact with the students and technical staff	2.77	High	5
The distance education program in this university has reached a reasonable number of its target market of students	2.68	High	6
The students of the distance education program have a positive attitude towards their studies in distance education	2.53	High	7



**Extent of the distance education program (continuation)**

**n=117**

All important information related to the college such as schedules, catalogues, policies and procedures, are available in a range of user-friendly formats at your university	2.34	Low	8
<b>Average mean</b>	<b>2.76</b>	<b>High</b>	
<b>Index mean</b>	<b>2.79</b>	<b>High</b>	

Source: primary data, 2012

Table 4 indicated that most of respondents agreed that they had the required equipments for distance educations are available in your universities measured in very high Mean of 3.69, this implies that both universities have required ICT equipments to run the distance education.

Table 4 showed that required support services for distance education are in a position in universities as indicated Mean of 2.96, high number of respondents agreed that this was strong enough.

Table 4 showed that both universities encourages lecturers to integrate technologies into the teaching process as respondents strongly agreed that universities performed this managerial style with (Mean=2.92),

Table 4 showed that responses from the respondents confirmed that qualified staff for distance education are available. According to (Mean 2.91) availability of skilled distance education staff is high.

Table 4 indicated that more respondents agreed that both universities provided students with multiple communication options with Mean of 2.72, which was high support to students such as telephone, internet, email etc.

Table 4 showed that respondents agreed that both universities selected and used the appropriate tools, technology and media in delivery of distance learning (2.71) which is quite high.

Table 4 showed that respondents agreed that distance program equips the students with the useful skills and knowledge the average of responses (Mean =2.61), which implies high rate of positive response.

Table 4 indicated that most of the respondents did not agree that the distance courses are well designed and delivered to achieve the expected learning outcomes with low Mean of 2.50, this implies that both universities had not well designed and delivered to achieve the expected leaning outcomes of distance education.

Table 4 showed that the majority of respondents agreed that the tuition fees of distance courses were not reasonable in comparing with other regular courses in both universities (Mean =2.21). This implies that both universities charges deferent rates of tuition fees to the deferent programs of learning.

Table 4 showed that average of respondents agreed that there is no difference in the teaching content between those on the distance education program and those on campus as Mean of 1.98 which is low.

Table 4 revealed that the majority of respondents agreed that the courses in distance learning had the required quality strongly (Mean = 3.37), this implies that distance education can compete the other regular learning modes.

Table 4 indicated that the majority of universities agreed that the delivery technology (e.g. computers, internet, and data projectors) were strongly reliable to support students' needs as the score of Mean = 3.18, this states the high reliability of delivery technology for students' needs.

Table 4 revealed that majority respondents agreed that the distance learners were prepared to engage in self-directed learning as high as the Mean=3.17, this implies that students in both universities were ready to adjust the culture in distance education.

Table 4 revealed that majority respondents agreed that the support services (e. g. library services, admission services, financial aid, and advising) were accessible to the students, (Mean=3.09), it is clear that distance education students were highly accessed to the students services.

Table 4 indicated that the majority of respondents agreed that the distance learners clearly had known who to contact for academic needs (Mean =2.97), this implies that students of distance education had no problem with connection to their faculties.

Table 4 revealed that most of respondents agreed that the implementation of the distance program had highly involved by all stakeholders as score of Mean 2.95, which implies that most of the stakeholders' were participated in distance education programs.

Table 4 revealed that the majority of respondents agreed that the distance learners clearly understood the faculty expectations (Mean =2.94), this implies that students of distance education were strong understood the faculty expectations which retain the good relationship among distance education stakeholders.

Table 4 revealed that the majority of respondents agreed that the lecturers were well prepared to design, develop, and teach distance courses (Mean =2.79), which means that both universities teaching staff can delivery distance lessons in good quality.

Table 4 revealed that the distance education courses in this universities were not well designed to suit the needs of distance learners as responses of both universities staff scored Mean = 2.50, which is low rating.

Table 4 revealed that the distance education courses offered in both universities were not accredited with professional bodies as the score of responses of the universities staff (Mean=2.48), which implies that universities did not have strong professional bodies for their distance education programs.

Table 4 revealed that majority of respondents agreed that both universities had strongly provided adequate student support services such as library services, admission services, electricity, financial aid, and advising services (Mean=3.05), so that this implies that universities had offices of admissions, counseling, and students affairs.

Table 4 revealed that the majority of respondents agreed that there was clear evaluation and assessment of instructional techniques, program design, and students' performance as the score of Mean=2.97 is high, and it implies that both universities have formal evaluation system in distance education.

Table 4 revealed showed that the majority of respondents agreed that the staff of the distance education program had a positive attitude towards the offering university (Mean =2.93), it means that university staff are more satisfied with distance education comparing to students' attitude.

Table 4 revealed that majority of respondents agreed that both universities provided appropriate levels of technical support via a range of technologies and over a broad range of times (Mean=2.78)

Table 4 revealed that majority of respondents agreed that the delivery technology in this university was reliable in enabling universities interact with the students and technical staff as the Mean=2.77, so that the delivery technology highly responsible the interaction between distance education stakeholders.

Table 4 indicated that respondents agreed that the distance education program in this university had reached a reasonable number of its target market of students with Mean =2.68, so that in both universities distance education had reached its target students.

Table 4 indicated that the majority of respondents agreed that the students of the distance education program had a positive attitude towards their studies in distance education (Mean =2.53) it means that students in both universities were quite satisfied with this program.

Table 4 revealed that majority of respondents agreed that all important information related to the college such as schedules, catalogues, policies and procedures, were less available in a range of user-friendly formats in the universities (Mean=2.34), so this implies that both universities were not disseminated the required information related to the distance education.

**Table 5**  
**Relationship between ICT Resource availability and Extent of**  
**Distance Education**  
**n=117**

<b>Variable correlated</b>	<b>r-value</b>	<b>Sig-value</b>	<b>Interpretation</b>	<b>Decision on H<sub>0</sub></b>
ICT Resource availability and extent of Distance Education	0.739	0.000	Significant relationship	Rejected

*Source: primary data, 2012*

Table 5 revealed that there is a strong relationship between ICT resource availability and distance education. This relationship between the two variables was strong positively correlated.

The level of significance was computed at 0.000 which is below the standard correlation level of 0.05. Where, it indicated significant relationship. Pearson correlations reading at .739 is an indicator of strong and positive relationship. In view of this output the null hypothesis was rejected and the alternative hypothesis was accepted leading to the conclusion.

**Table 6**  
**Regression Analysis between the Dependent and Independent**  
**Variables**

<b>Variables Regressed</b>	<b>Computed F-Value</b>	<b>r<sup>2</sup></b>	<b>Sig-Value</b>	<b>Interpretation</b>	<b>Decision on Ho</b>
Distance Education and ICT Resource availability	138.77	0.546	0.000	Significant influence	Rejected

Source: primary data, 2012

From the table 6, it is clear that this model has good correlation as the r is significant effects ( $r^2=.546$ ). The model is significant ( $F=138.77$ ,  $P=0.000$ ). This implies that 54.6% of dependent variables influence independent variable. The researcher concludes that there is sufficient evidence at the 0.05 level of significance, that the ICT resource availability affect the distance education.



## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMEDATION**

#### **Introduction**

This chapter states the major study findings on ICT resource availability and distance education in selected Somaliland Universities and cross-reference with the findings of other researches from the related studies, it also presents the conclusion and recommendations of the study extracted from the study findings.

#### **SUMMARY OF FINDINGS**

The study revealed that radio and television broadcast are the least accessible in distance education in Somaliland. The growth and application of new ICTs in the field of education in Somaliland is fraught with immense difficulties. However, the choice of the medium is of paramount importance in ensuring that the objectives of using a particular media are fulfilled. From the relative analysis of radio and TV as media in both universities, it was concluded that the major factors that decide the growth and application of ICT resource in distance education are the access to the media, its cost effectiveness, availability, its user friendliness and its pedagogic value. Unless all these factors are taken proper care of, growth and application of ICTs in Education will continue to be as daunting a task as it ever was.

In the literature, According to Rogers (1995) one of the major factors affecting people's attitudes toward a new technology is related to the features of the technology itself. Rogers points out five basic features of technology that affect its acceptance and subsequent adoption: relative advantage, compatibility, complexity, observability, and traceability and this implied that lecturers had a negative attitude to ICT resource deployment in education, whereas, this study found out that the staff of distance education in both University of Hargeisa and Amoud University had a positive attitude towards offering distance education programs via available ICT resource.

### **Characteristics of respondents:**

The Results from analysis on objective 1 revealed that there were more males than females. This implies that all the workers in these two universities were predominantly by males.

The study further showed that the most of the respondents were 30 to 39 years. This means that the majority of the university staff were in ages (30 to 39 years) because these ages are most productive and educated people in Somaliland.

In the case of their educational background, most of staff in distance education in selected university in Somaliland were the level of masters' degrees, whereas the least of these staff were Ph.D and most of them had working experience in this distance education field of two years.

### **Access to Information Communication Technology Resource:**

This study found that distance education staff had strong access to basic ICT resources. The ICT resource including, printing, personal computers, phones, wireless internet, radios broadcast, emails, and internet based course, whereas the study found out that there was a low level of access to television broadcasting in distance education delivery.

The main ICT resources for distance education were accessed in both Amoud University and University of Hargeisa, this implies that availability of these facilities was very high and it this was paramount in modern distance education process. Availability and accessibility of ICT resources were the essential in teaching and learning process remotely.

According to result of analysis on the Access to ICT resource, the level of access that distance education staff had to this equipment was high.

### **The level of information communication technology resource usage:**

This study found out that both universities distance education staff used this ICT resource strongly, the staff utilized in their day academic activities, Printing facilities, telephone communications, emails, internet based courses, desktop publishing, personal computers, wireless internet. These facilities were backbone for modern education, for example these

ICT resources used course design, development and delivery in distance education also universities disseminate modules and assignments through email systems, where they posted PowerPoint presentations on their elearning systems. Also printing services were very important in course contents publications. In another hand this study found out that the level of usage of video cassettes and radio broadcasting was low in distance education department.

### **Course Input for Distance Education:**

This study found out that course input in distance education was strongly high, which implies that both universities made available the majority of course inputs for anticipation of distance education effectively. The following inputs were allocated in the departments of distance education; required ICT equipments, qualified staff, appropriate tools and technology, required support services and universities provided students with multiple communication options. Whereas, the tuition fees of distance courses were not strongly reasonable in comparing with other regular courses and the level of designing and delivering to achieve the expected learning outcomes in selected Somaliland universities were low.

In other hand there were strong difference in the teaching contents between those on the distance education program and those on campus, this implied that the students of distance education were given less contents at the same time comparing to on campus, in some courses the selected Somaliland universities offered only four courses per semester.

### **Level of Course implementation for distance education:**

This study found out that some areas of course implementation were strongly low like the distance education courses in the studied universities were not well designed to suit the needs of distance learners: The distance education courses offered in universities were not accredited with professional bodies and rewards and incentives were not given to lecturers for teaching distance learning. On the contrary, the level of course implementation was very high as the delivery technology (e.g. computers, internet, and data projectors) were strongly reliable to support students' needs, the distance learners clearly and strongly understood the faculty expectations and the distance learners were prepared to engage in self-directed learning strongly.

### **Level of distance course outcomes:**

This study found out that high level of distance education course outcomes, including clear evaluation and assessment of instructional techniques, program design, and students' performance, the distance education program in the two studied universities had reached a reasonable number of the target market of students because both of lecturers in distance education and students had positive attitudes to this field. In contrary, all important information related to the college such as schedules, catalogues, policies and procedures, were not available in a range of user-friendly formats in the universities that were studies that implied that students were not getting the updated information on their learning process

## **Conclusion**

According to Moore (2003), the transaction that we call distance education occurs between teachers and learners in an environment having the special characteristic of separation of teachers from learners. It also states one of the elements of Transactional Theory is autonomy or the degree of self-directedness of the learner whereas this study revealed that the distance learners in selected universities in Somaliland were strongly prepared to engage in self-directed learning.

Based on the findings of this study, there was a significant relationship between ICT resource and distance education. This relationship between the two variables was strong positively correlated. The level of significance was computed at 0.000 which was below the standard correlation level of 0.05. Pearson's correlations coefficient at 0.739 was an indicator of a strong and positive relationship. In view of which output the null hypothesis was rejected. The study established that ICT resources were related to the effectiveness of distance education and it was the first time that it was proven in Somaliland.

In the study, the Transactional Theory was validated in terms of same application measurements where distance education in selected universities in Somaliland as these learners were self-directed, autonomous and there was structure of the instructional distance

education programs, also lecturers and students are completely separated from each other but education was offered via ICT. In the earlier studies there was a gap in the internet bandwidth which was not enough to deliver the distance education sometimes, in this study, same gap was found in the areas of internet bandwidth and still there is challenge in internet purchase cost. The study confirmed that the selected universities in Somaliland have the capacity to deliver the distance learning currently.

## **Recommendations**

The study recommended the following:

1. Policy-makers at all levels should encourage the female participants in distance education by giving them scholarship and other opportunities
2. That young people of the 20-29 years were who less participating in distance education be motivated by the Policy-makers through a campaign for increasing the number of participant of this age in distance education.
3. Policy-makers, practitioners and Somaliland higher institutions should continue to move forward in developing and implementing distance education programs when those programs meet identified ICT resource needs designed and managed as carefully as traditional education programs.
4. To promote cultural diversity, the university administration should invest more on television channels for distance education purposes.
5. Adequate funding should be made available to encourage learning and research on internet-based journals and electronic course materials in distance education program.
6. The university administration should invest more on the acquisition of personal computers and other electronic resources to create variety distance learning fields.
7. The university management should standardize distance education contents in order to maintain the quality of the education comparing to traditions learning.



8. The university administration and the government through the appropriate ministry adopts and enhances capacity building pedagogical and technological aspects.
9. The study revealed that all important information related to the college such as schedules, catalogues, policies and procedures were not available in a range of user-friendly formats at both universities. To solve this problem, universities management should create more communication channels such as electronic forums, informative websites and electronic group mailing systems.
10. The findings clearly revealed that incentives and rewards given to lecturers for teaching distance learning were not satisfactory, and it was normal that low paid employees perform poorly, universities should maintain the maximum compensation to their staff.
11. The university management should engage in collaboration effort with foreign accredited professional bodies that could assist the staff and students in offering universal syllabus, scholarship programs and academic research in distance education that can be of benefit to all.
12. The study clearly revealed that usage of ICT in distance education were related to the effectiveness of distance education, that to encourage this, Somaliland government should support universities to receive affordable educational ICT equipment by deducting importing related tariffs.

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**APPENDIX 1B**  
**TRANSMITTAL LETTER FOR THE RESPONDENTS**

---

Dear Sir/ Madam,

Greetings!

I am a Masters of Business Administration in Information Technology candidate of Kampala International University. Part of the requirements for the award is a thesis. My study is entitled, **Information Communication Technology (ICT) Resource Availability and Distance Education in Selected Universities in Somaliland**. Within this context, may I request you to participate in this study by answering the questionnaires? Kindly do not leave any option unanswered. Any data you will provide shall be for academic purposes only, treated with utmost confidentiality and no information of such kind shall be disclosed to others.

May I retrieve the questionnaire within five days (5)?

Thank you very much in advance.

Yours faithfully,

Mr. Abdisamad Egah Habaneh



## APPENDIX II

### CLEARANCE FROM ETHICS COMMITTEE

Date\_\_\_\_\_

#### Candidate's Data

Name\_\_\_\_\_

Reg.# \_\_\_\_\_

Course \_\_\_\_\_

Title of Study\_\_\_\_\_

#### Ethical Review Checklist

##### The study reviewed considered the following:

\_\_\_ Physical Safety of Human Subjects

\_\_\_ Psychological Safety

\_\_\_ Emotional Security

\_\_\_ Privacy

\_\_\_ Written Request for Author of Standardized Instrument

\_\_\_ Coding of Questionnaires/Anonymity/Confidentiality

\_\_\_ Permission to Conduct the Study

\_\_\_ Informed Consent

\_\_\_ Citations/Authors Recognized

**Results of Ethical Review**

\_\_\_ Approved

\_\_\_ Conditional (to provide the Ethics Committee with corrections)

\_\_\_ Disapproved/ Resubmit Proposal

**Ethics Committee (Name and Signature)**

Chairperson \_\_\_\_\_

Members \_\_\_\_\_

**APPENDIX III**  
**INFORMED CONSENT**

I am giving my consent to be part of the research study of Mr. Abdisamad Egah Habaneh that will focus on Information Communication Technology (ICT) resource availability and distance education.

I shall be assured of privacy, anonymity and confidentiality and that I will be given the option to refuse participation and right to withdraw my participation anytime.

I have been informed that the research is voluntary and that the results will be given to me if I ask for it.

Initials: \_\_\_\_\_

Date \_\_\_\_\_

## **QUESTIONNAIR ON ICT RESOURCE AVAILIBILITY AND DISTANCE EDUCATION**

### **Part A: FACT SHEET DEMOGRAPHIC CHARACTERISTIC OF THE RESPONDENTS**

#### **Gender:**

\_\_\_\_(1) Male

\_\_\_\_(2) Female

#### **Age:**

\_\_\_\_(1) 20 - 29

\_\_\_\_(2) 30 - 39

\_\_\_\_(3) 40 - 49

\_\_\_\_(4) 50 - Above

#### **Under ICT Discipline (Please Specify):**

\_\_\_\_ (1) Certificate

\_\_\_\_ (2) Diploma

\_\_\_\_ (3) Bachelors

\_\_\_\_ (4) Masters

\_\_\_\_ (5) Ph.D.

**Other qualifications** other than education discipline

**Number of Years Distance Education Experience (Please Tick):**

\_\_\_\_(1) Below one year

\_\_\_\_(2) 1- 2yrs

\_\_\_\_(3) 3-4yrs

\_\_\_\_(4) 5-6yrs

\_\_\_\_(5) 7 years and above

**Department/ Faculty**

\_\_\_\_Computer Science

\_\_\_\_Business of Management

\_\_\_\_Education

\_\_\_\_Social Sciences

\_\_\_\_Law

\_\_\_\_Health Science

**Position or Designation**

\_\_\_\_ University administrative staff

\_\_\_\_ University Academic staff

\_\_\_\_ University technical staff

\_\_\_\_ Student

**PART B: QUESTIONNAIRE ON INFORMATION COMMUNICATION  
TECHNOLOGY RESOURCE AVAILABILITY**

Direction: Please respond to each item by using the scoring guide below.  
Kindly write your best selection on the space before each item. Be truthful  
about your options as there is no right or wrong answers.

Score	Response Mode	Description
4	Strongly agree (SA)	You agree with no doubt
3	Agree (A)	You agree with some doubt
2	Disagree (DA)	You disagree with some doubt
1	Strongly Disagree (SDA)	You disagree with no doubt

---

**Access to ICT Resources Availability**

- \_\_\_\_\_ 1. You have access to print material facilities whenever you need  
them in your distance education program in this university
- \_\_\_\_\_ 2. You have access to video cassettes whenever you need them in  
your distance education program in this university
- \_\_\_\_\_ 3. You have access to radio broadcast whenever you need them in  
your distance education program in this university
- \_\_\_\_\_ 4. Your have access to television broadcasts whenever you need  
them in your distance education program in this university

- \_\_\_\_\_ 5. You have access the email system whenever you need them in  
your distance education program in this university
- \_\_\_\_\_ 6. You have access Internet-based course material for my  
distance education program in this university
- \_\_\_\_\_ 7. You have access Interactive multimedia on computers for your  
distance education program in this university
- \_\_\_\_\_ 8. Your have access to university wireless internet you need them  
in your distance education program in this university
- \_\_\_\_\_ 9. Your have access to personal computers in the university  
computer labs whenever you need them in your distance  
education program in this university

### **Usage of ICT Resources**

How often do you use the following Information Communication Technology facilities?

- \_\_\_\_\_ 1. Printing facilities
- \_\_\_\_\_ 2. Videos cassettes
- \_\_\_\_\_ 3. Radio broadcasting
- \_\_\_\_\_ 4. Television broadcasts
- \_\_\_\_\_ 5. Educational material on CD-ROMs
- \_\_\_\_\_ 6. E-mail system
- \_\_\_\_\_ 7. Internet based educational materials
- \_\_\_\_\_ 8. Interactive multimedia on computers
- \_\_\_\_\_ 9. Desktop publishing software
- \_\_\_\_\_ 10. Personal computers
- \_\_\_\_\_ 11. University wireless internet
- \_\_\_\_\_ 12. Constant power supply at our university



**PART C: QUESTIONNAIR ON EXTENT OF THE DISTANCE EDUCATION PROGRAM**

Direction: Please respond to each item by using the scoring guide below. Kindly write your best selection on the space before each item. Be truthful about your options as there is no right or wrong answers.

Score/Rating	Response Mode	Description
4	Strongly agree (SA)	You agree with no doubt
3	Agree (A)	You agree with some doubt
2	Disagree (DA)	You disagree with some doubt
1	Strongly Disagree (SDA)	You disagree with no doubt

---

**A. Program Inputs**

- \_\_\_\_\_ 1. The required equipments for distance education are available in your university
- \_\_\_\_\_ 2. The required qualified staffs for delivery of distance education are available in your University
- \_\_\_\_\_ 3. Your university selects and uses the appropriate tools, technology and media in delivery of distance learning programs
- \_\_\_\_\_ 4. Your university encourages lecturers to integrate technologies into the teaching process
- \_\_\_\_\_ 5. The required support services for distance education are in a position for your University

- \_\_\_\_\_ 6. There is no difference in the teaching content between those on the distance education program and those on campus
- \_\_\_\_\_ 7. The distance program equips the students with the useful skills and knowledge
- \_\_\_\_\_ 8. The distance courses are well designed and delivered to achieve the expected learning outcomes (there is a good balance of Lectures, tutorials, practical etc.)
- \_\_\_\_\_ 9. Your university provides students with multiple communication options (telephone, internet, email) for assistance and contacting support services
- \_\_\_\_\_ 10. The tuition fees of distance courses are reasonable in comparing with other regular courses.

**B. Program Implementation**

- \_\_\_\_\_ 1. The distance education courses in this university are well designed to suit the needs of distance learners
- \_\_\_\_\_ 2. The distance education courses offered your universities are accredited with professional bodies/agencies/institutions
- \_\_\_\_\_ 3. The implementation of the distance program is involved by all stakeholders
- \_\_\_\_\_ 4. The delivery technology (e.g. computers, internet, and data projectors) are very reliable to support students' needs

- \_\_\_\_\_ 5. The support services (e. g. library services, admission services, financial aid, and advising) are accessible to the students
- \_\_\_\_\_ 6. The distance learners are prepared to engage in self-directed learning
- \_\_\_\_\_ 7. The distance learners clearly understand the faculty expectations
- \_\_\_\_\_ 8. The distance learners clearly know who to contact for academic needs
- \_\_\_\_\_ 9. The lecturers are prepared to design, develop, and teach distance courses
- \_\_\_\_\_ 10. Incentives and reward are given to lecturers for teaching distance learning
- \_\_\_\_\_ 11. The courses in distance learning have the required quality

### **C. Program Outcomes**

- \_\_\_\_\_ 1. There is clear evaluation and assessment of instructional techniques, program design, and students' performance
- \_\_\_\_\_ 2. The students of the distance education program have a positive attitude towards their studies in distance education
- \_\_\_\_\_ 3. The staff of the distance education program has a positive attitude towards the offering university
- \_\_\_\_\_ 4. The distance education program in this university has reached a reasonable number of its target market of students
- \_\_\_\_\_ 5. The delivery technology in this university is reliable in enabling you interact with the students and technical staff
- \_\_\_\_\_ 6. All important information related to the college such as schedules, catalogues, policies and procedures, are available in a range of user-friendly formats at your university
- \_\_\_\_\_ 7. Your university provides appropriate levels of technical support via a range of technologies and over a broad range of times.
- \_\_\_\_\_ 8. Your university provides adequate student support services such as library services, admission services, electricity, financial aid, and advising services

## Appendix IV

### Calculation of content Validity Index

$$\text{CVI} = \frac{\text{No of items declared valid}}{\text{Total no of questions}}$$

Total no of questions

$$\text{Section A} = \frac{17}{21} = 0.809$$

$$\text{Section A} = \frac{22}{29} = 0.758$$

$$\begin{aligned}\text{Average} &= \frac{\text{section A} + \text{section B}}{2} \\ &= \frac{0.809 + 0.758}{2} = \frac{1.567}{2} \\ &= 0.784\end{aligned}$$

## Appendix V

### CALCULATION OF SAMPLE SIZE

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

Where N= was target population

n= was the sample size

e = Level of significance = e = 0.05 =  $e^2 = (0.05)^2 = 0.0025$

$$n = \frac{165}{1 + 165(0.0025)}$$

$$= \frac{165}{1+0.4125} = \frac{165}{1.4125} = 117 \text{ respondents}$$

## CURRICULUM VITAE

### PERSONAL DETAILS:

Date: March 2, 2013

Name: Abdisamad Egah Habaneh

Date of Birth: 1979

Place of Birth: Borama

Marital Status: Married

Email: [habaneh@hotmail.com](mailto:habaneh@hotmail.com)  
[habaneh@amouduniversity.org](mailto:habaneh@amouduniversity.org)

Mobile Phone: +252-2-4458444

Languages: Somali  
English  
Arabic

### Education

2008 University of Fort Hare, South Africa, Distance Program

- Certificate in Financial Planning and Management (ACCA 1,2,3,4 )

2006 African Advanced Level Telecommunications Institute, Nairobi, Kenya

- Certificate, IT Essentials I: PC Hardware and Software
  - Certificate, IT Essentials II: Network Operating Systems
- 1999-2003 School of Business and Public Administration, Amoud University, Borama, Somaliland
- BBA; Bachelor of Business Administration

### **Short Courses**

- 2010 University of Nairobi Enterprises and Services Limited  
Certificate in Quality Assurance
- 2010 University of Nairobi Enterprises and Services Limited  
Certificate in Governance of Education
- 2010 European Commission and ADRA  
Project Design and Proposal Writing
- 2009 Association of Universities and Colleges of Canada  
Certificate of Communication Delivery and Technology

### **Workshops, Seminars and Trainings**

- April, 2007 Financial Planning and Management, ToT face II led by UNDP East Africa University, Bosaso.
- February 2005, Teaching Measurement and Evaluation Seminar led by CfBT, Amoud University.



**Work****Experience**

2012-Present employer: Amoud University, Somaliland

Position: Dean, **Faculty of Business and Public Administration**

**Duties and Responsibilities:**

- Preparing and revising, as necessary, academic program plans for the Faculty.
- Overseeing all personnel matters involving academic and non-academic employees including: recruiting, appointment, re-appointment; termination and dismissal; faculty evaluation, tenure, promotion and merit; and the preparation and approval(s) of faculty workload plans and long-range professional development plans.
- Promoting and serving as a model for teaching professional achievement and professional service
- Communicating effectively with various constituencies within the University, surrounding community and State regarding the Faculty
- Preparing and delivering written and oral communication to a variety of stakeholders for the purpose of identifying issues and recommendations, and serving as a university representative
- Overseeing the preparation of class schedules and complying with institutional reporting requirements and

maintaining student records.

Director of Distance and eLearning Centre

- Responsible for coordination of all planning and day-to-day activities of the centre under the supervision of the Dean
- pro-actively manage relationships with internal and external stakeholders to optimize opportunities for project success
- manage all information systems necessary for the proper planning, prioritizing, and implementation of the monthly to do list
- Independently compose, review, approve, edit, and, as needed, sign outgoing correspondence on behalf of the agency executive
- resolving disputes and differences between university and clients
- ensure that the institutional asset is effectively and efficiently used in the public interest, and that state property is appropriately protected
- establish and maintain close links to the staff in order to ensure proper alignment of policy and best practice;
- troubleshooting the connectivity and networking of the deferent offices and computer labs
- responsible the installation and maintenance of Vsat and other in
- Schedule, organize interviews and participate in applicant



interviews

- Inform unsuccessful applicants
- Monitor daily attendance and Investigate and understand causes for instructors/staff absences.
- assuring the availability of appropriate technology, human resource, budget and time for implementation of the short courses projects
- preparing especial and briefing reports and disseminate to appropriate recipients
- Facilitating departmental seminars and workshops

#### **Other Skills and Capabilities**

- Excellent in Graphic and Website designing
- Strong computer skills including Microsoft Office 2003, 2007 Suites, , accounting packages, internet, email, graphics software and reasonably good knowledge on MS Office Project
- Excellent Communication skills
- Formal and business writing skills acquired through my university studies and work experience
- Public Speaking/Presentation Skills obtained through my university studies and teaching experience
- Industrious, willingness to learn, comprehensive problem solving abilities, ability to deal with people with excellent interpersonal skills

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