SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY

College of Graduate Studies and Scientific Research

FACULTY OF EDUCATION

CHALLENGES OF DISTANCE LEARNING IN UGANDAN UNIVERSITIES.

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تحديات التعلم عن بعد في الجا معات اليوغنديه

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Thesis submitted in Fulfillment of the requirement of PhD Degree, in Education administration

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DECLARATION

I, Kasiita Musa, declare that this work is as a result of my own effort. It has not been presented for a degree or any award in any university.

Signed..

Date...

APPROVAL

This work has been done and submitted with my approval as the university supervisor.

Signature...

PROFESSOR ALI KHALID MUDAWI

Date..

DEDICATION

This work is dedicated to my late Hajjat Ruqqayah and Hajj Uthuman, my wife and my beloved children plus the entire family for their moral and spiritual support. They have been very supportive and patient, above all the almighty Allah who has made everything possible.

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Table of contents

List of Tables and Figures

Acronyms and abbreviations

BED: Bachelor of Education.

DL: Distance Learning.

DPE: Diploma in Primary Education.

ICT: Information and communication technology.

IUIU: Islamic University in Uganda.

KIU: Kampala international University.

KU: Kampala University.

KYA: Kyambogo University.

MUK: Makerere University.

NCHE: National Council for Higher Education.

OECD: Organization for Economic Co-operation and Development.

U.A.C.E: Uganda Advanced Certificate of education.

U.S.A: United States of America.

UNEB: Uganda national Examinations Board.

UNESCO: United Nations Educational, Scientific and Cultural organization.

ODL: Open and Distance Learning.

DE: Distance Education.

SPSS: Statistical Package for Social Sciences

NOU: Nigeria Open University.

SSS: Student Support Service.

OER: Open Education Resources.

LMS: Online Management System.

CS: Contact Services.

CDL: Centre for Distance Learning

BOU: Bangladesh Open University

COL: Common Wealth Learning.

QA: Quality Assurance.

ODeL: Open Distance Education Learning

GIS: Geographical Information Systems

UDSM: University of Dar es salaam

GER: Gross Enrollment Ratio

SEE: Social Educational and Ethics

DTP: Distance Training Programme

FGD: Focus Group Discussion

WU: Western University

NU: North University

NVIVO: It is a qualitative data analysis tool.

OCW: Open Course Ware

SMS: Short Messaging Service

CDP: Curriculum Development Programme

OLC :   Online Learning Consortium.

Abstract

The research study focused on the challenges faced in running distance learning programs in Ugandan Universities. The study recognizes the development of distance learning in Uganda in general and the adoption of distance learning in the provision of education to a big section of people who would not get a chance to study. This study was carried out in five Universities including; Makerere, Islamic University in Uganda, Kyambogo, Kampala international university, and Kampala University. A descriptive survey design was adopted in this study. The primary data was collected through the use of questionnaires and interview tools. The secondary data was obtained from reference books, journals and internet materials. Data were collected through 332 questionnaires for students, 109 for lecturers and administrators, 20 interview schedules for NCHE staff. Content validity of the instruments was done before instruments were pre-tested and reliability calculated using the split-half technique for internal consistency. The data were analyzed both qualitatively and quantitatively using statistical package for social sciences(SPSS). The study established that institutions offering DL in Uganda are governed by their institutional policies and that DL delivery in Uganda is faced with various challenges that hinder its full implementation. The key challenges identified during the study were; prohibitive registration requirements, lack of capacity by students to own personal computers, lack of access to the internet and being expensive, lack of access to computer labs, lack of national policy for distance learning. It is hoped that the findings of this study and the recommendations suggested would aid the government and Universities in Uganda to achieve their goal of providing improved DL. It would aid in the policy establishment to cater to increased demand for university education, financing for DL programs, infrastructural development for DL and other student support services. Given these challenges, key recommendations were made, which include: a national policy for distance in Uganda be put in place, human resource development, quality assurance and social acceptance of the DL products. Mobilization of resources by government to establish infrastructures for ICT, provision of affordable and accessible internet, the registration requirements be relaxed, training of staff be strengthened in DL, and study materials be produced and provided on time. Above all, students are availed with an opportunity to access computer labs for the universities. The staff and students must be provided with an educational environment conducive to learning and teaching. This calls for the provision of adequate resources. ICT infrastructures, human resources, and other support systems should be provided.

ملخص

مستخلص البحث

ركزت الدراسة على التحديات التي تواجه برامج التعليم عن بعد في جامعات أوغندا، يقر هذا البحث بتطور التعليم عن بعد في أوغندا بصفة عامة، وتبنى التعليم عن بعد كوسيلة لتقديم التعليم لأكبر عدد ممكن من المتعلمين الذين لم تكن لديهم فرصة الدراسة. لقد أجريت هذه الدراسة في خمس جامعات وهي: جامعة ماكيريري والجامعة الإسلامية في أوغندا وجامعة كيامبوغو وجامعة كمبالا العالمية وجامعة كمبالا.

وقد تمت تصميم المسح الوصفي واتخاذه في هذه الدراسة، كما استخدمت الاستبانة والمقابلة أدوات لجمع المعلومات الأساسية، في حين جمعت المعلومات الثانوية من الكتب والمجلات ومن شبكة المعلومات العالمية الإنترنيت.

هذا، وقد أجريت الاستبانة ل 332 طالب وطالبة، و109 محاضر وإداري، كما أجريت المقابلة ل 20 من موظفي المجلس الوطني للتعليم العالي، كما تم التحقق من صلاحية أدوات جمع المعلومات قبل استخدامها والتحقق كذلك من أنها معول عليها مستخدمين في ذلك الحزمة الإحصائية للعلوم الاجتماعية.

أثبتت الدراسة أن المؤسسات التعليمية التي تقدم برامج التعليم عن بعد في أوغندا محكومة سياساتها الخاصة بها، وأن التعليم عن بعد في أوغندا موجه بمختلف التحديات التي تقف دون تنفيذه بصورة كاملة.

وأن أهم هذه التحديات التي تم تحديدها تتمثل في صعوبة متطلبات التسجيل، عدم ملكية الطلاب الحواسيب الخاصة بهم، وعدم تمكن الطلاب من الاتصال بالإنترنت للتكاليف الباهظة، وعدم تمكنهم من الاتصال بمعامل الحواسيب، وعدم توفر سياسة وطنية متبعة في إدارة التعليم عن بعد. ومن الأمل أن النتائج التي تمخضت عن هذه الدراسة توصياتها ستساعد الحكومة الأوغندية وما فيها من الجامعات في تحقيق هدفها في تقديم التعليم عن بعد المحسن، وستساعد كذلك في إنشاء سياسة تهتم بالطلب المتزايد للتعليم الجامعي، وفي تمويل برامج التعليم عن بعد، وتطور البنية التحتية له، والخدمات الأخرى لمساعدة الطلاب.

وعلى ضوء هذه التحديات، فقد قدمت توصيات تشمل الآتي:

إنشاء سياسة وطنية أوغندية للتعليم عن بعد، وتطوير الموارد البشرية في هذا المجال، والتأكد من الجودة، وقبول المجتمع لمخرجات هذا البرنامج، وقيام الحكومة بالبحث عن الموارد المالية لهذا البرنامج، وذلك الإنشاء البنية التحتية لتكنولوجيا المعلومات، وتوفير الإنترنيت بأسعار منخفضة، وتخفيض شروط التسجيل، وتقوية وإعداد وتأهيل الموظفين في مجال التعليم عن بعد، وتوفير الوسائل التعليمية في الوقت المناسب.

وفوق هذا كله، يجب توفير الفرص للطلاب للاتصال بمعامل الحاسوب للجامعات، ويجب توفير البيئة الدراسية التعلمية المشجعة للموظفين والطلاب، وهذا ما يدعو لتوفير الموارد المالية والبنية التحتية لتكنولوجيا المعلومات، والمواد البشرية الكافية الأنظمة المساعدة الأخرى.

Chapter One

The General Framework of the Study

1.1 Introduction

The ever increasing number of students who aspire to join higher education in Uganda is impressive. In UACE result released by UNEB in 2016 reflected that a total of 101495 qualified to join higher education. However, despite this increasing enrolment, there is still a large gap between the tertiary GER (8.59%) and secondary GER (42.74%) in Sub-Saharan Africa (World Bank, 2014) an indication that a large population of young people who are still not accessing tertiary education. This imply that universities have less capacity to absorb all these numbers because of lack of facilities hence these successful students shall have no chance to be admitted to higher education.

The education sector has experienced an unprecedented growth in the past decades due to the revolution in the services of distance learning (Berg, 2000). In the united states of America, higher education alone more than 5.6 million university students were enrolled in at least one online course in autumn of 2009 up from 1.6 million in 2002. (statistics., 2001a) observed that there was decline" in 1995, 33% of 2 years and 4- year higher education institutions that offers distance education courses in the U.S.A. In 1997-1998, this had grown to 44% of 2-year and 4-year higher education institutions. Another area that has received unprecedented advance is Europe.(Chripa and Carl, 2014), observed that "Enrolment numbers in European distance teaching universities alone exceed at least 2 million. Education a Distancia, Spain: 250,000 Universitat liberated Cataluna, Spain: 80,000 Fernuniversitit Hagen: 80,000, Federation Universiture del Enseignement a distance/center national denseignement a distance, France: 50,000, Open University the Netherlands: 20,000 are members of the

largest numbers. Africa as continent is doing the catch up in the long distance education, to this effect, (Isaac and Emile, 2015), observes that" intake of students into university of Ghana from the 2009/10 academic year, learners were admitted in the program, and another 2,508 learners were admitted for 2010/11 academic year in addition to 748 mature students (university of Ghana basic statistics, 2007). The university system has been unable to accommodate the ever-growing number of qualified candidates seeking higher education in the country (British Council, 2011).

The distance education phenomenon traces its origins to mid-19th century Europe and the United States. The pioneers of distance education used the best technology during the time of postal system to open educational opportunities to people who wanted to learn but were not able to attend conventional schools. People who most benefited from such correspondence education includes those with physical disabilities, women who were not allowed to enroll in those educational institutions open to men, people who had jobs during normal school hours and those who lived in remote regions where schools did not exist (statistics., 2001b).

(Daniel, 1996), emphasizes that, the past two decades have indeed seen major developments. Not only have campus based and distance model of delivery become increasingly blurred with the spread of new technology but also the types of providers have changed. (Holmberg, 2005), explains the massively growing demand for higher education has led to the creation of both the so-called 'mega Universities' and borderless networks of universities. Distance education has been a way of reaching out to adult learners since the early days of correspondence schools. (Chripa and Carl, 2014), observed that "all European countries included in the analysis either have national lifelong learning policies in place or have made significant progress towards the implementation of national lifelong learning policy or strategy. This phenomenon is being supported by governments and information industry (Farhad, 2005).

World declaration on education for all (Jomtein, 1990) stated as: Article 1:" meeting basic learning needs, every person –child, youth and adult shall be able to benefit from educational opportunities designed to meet their basic learning needs" (UNESCO, 2009). World conference on higher education in its communiqué, affirmed that, "the knowledge society needs is in the diversity of higher education systems, with a range of institutions having a variety of mandates and addressing different types of learners and the training offered which includes promoting research for development, use of new technologies and ensuring the provision of technical and vocational training, entrepreneurship education and programs for lifelong learning" UNESCO (2009),/ (Education, 1993) provided for provision for distance learning in California, it states: "in 1993 the California legislature EC 52522 permitting the superintendent of public institution to approve adult school plans to spend up to 5% of their block entitlement on innovation and alternative instruction delivery." The organization of Islamic cooperation under its arm(IRTI) observe that: "distance learning program (DLP) of (IRTI), aims to share development knowledge with multilateral development banks and financial institution by providing distance learning courses and lectures in Islamic banking and finance" (IRTI, 2010). In the treaty establishing a (European Union Commission, 2005) TITLE 11 FREEDOMS: Article11-74, Right to education: "Everyone has the right to education and to have access to vocational and continuing training". "This right includes the possibility to receive free compulsory education". The constitution of the republic of Uganda 1995 as amended in 2005 states: "The state shall take appropriate measures to accord every citizen equal opportunity to attain higher educational standard possible. Article 30: right to education. All persons have right to education."(Uganda., 1995). (Uganda., 1989), observes that ;(i) Tertiary institutions, especially the universities should expand activities of their centers for continuing education and extension work. (ii) Distance education through radio and television and correspondence education should be intensified as a prelude to starting

an Open university for this purpose by the year 2000, pp.119-120". (The government of Uganda, 1992), observed that: "An open school and an Open university should be established in due course to cater for the needs of continuing education at the secondary and tertiary level". Universities and other tertiary institution act, 2001 as amended in 2003, and as amended in 2006 gives mandate to public and private universities to offer programs of their choice under the national council of higher education supervision (The government of Uganda, 2001). Under this provision, the universities have enrolled students for distance learning. The statistics shown Table 1.1: enrolment statistics from 2011-2015.

Table 1.1 Enrollment statistics from 2011-2015.

Institution	2011	2012	2013	2014	2015
Makerere (MUK)	231	200	267	180	231
Kyambogo (KYU)	310	610	502	713	-
IUIU	217	217	207	248	317
KIU	-	840	532	317	192

Source: figures of numbers of students of BED/DPE program in the above table were got from following offices; program coordinator B.Ed./Ext MUK, Administrator, department of distance learning KYU, office academic registrar IUIU, Coordinator of distance and in-service education KIU. The above situation might be used as an explanation as to why universities enroll big numbers on distance education programs even when they do not have the required facilities, universities are likely to have problems in providing quality education as observed (Matovu, 2012).

In the face of massive expansion, and need for lifelong learning, the traditional way of delivering higher education through face to face approach has become simply inadequate. To this effect distance education was adopted to help students who would not be admitted in the traditional classroom programs to have education at home as observed (Aguti, 2006).

This explains the fact that distance education is the way which can increase higher education without increasing the number of colleges and universities as noted (Matovu, 2012).

Ugandan universities have started to adopt similar direction. They are running academic programs and employing more academic staff in the faculties and colleges, a step that has led to increase in the numbers of students registering for the distance learning in Uganda universities. The largest public university in Uganda, Makerere university for example enrolled about 3500 students to its external program in bachelor of education (BED external) and diploma in primary education (DPE) in 2003 (Jessica and Fraser, 2006).

Similar programs offered at the Islamic university in Uganda bachelor of education (BED External) and diploma (DPE) when the programs were started 44 students were enrolled in 2002 and the number shoot up to 240 in 2008. (Islamic university in Uganda, 2011). The above shows that Ugandan universities are opening their doors to distance learning.

The effects of distance learning on Ugandan universities conducting such programs seem to meet a number of challenges. For example, students are invited for lectures and examination during their work time.

The public and private universities administering distance learning seem to face administrative challenges in the management of the whole process. This is why some students complain and pullout from their respective programs.

The universities seem to have challenges with the mode of delivery, where by integration of technology in the teaching is still lacking as observed in the study conducted by (Jessica and Fraser, 2006) according to the results of the study, nearly 60% of the students and prospective students do not have access to video, computer and internet so decisions on which technology to use and how access is to be provided must be put into consideration (Jessica and Fraser, 2006).

This is in agreement with what is expressed by (Jessica and Fraser, 2006) that by February 2001 Uganda had only 1200 internet /email subscribers using wireless access and 4500 using the dial- up access (Jessica and Fraser, 2006).

With good effort and resources invested, distance education has a bright future as pointed out; by (Moore and Kearsley, 1996), (Peters, 1996), and (Bates, 2000) that enables the teacher and learner to bridge the distance between them. (Senta and Tschang, 2001), observed that online distance education be used to get the right types of content and learning to the individuals…'and to this end have been used for the production of study materials for distance learners. Be used to improve the learning (Bates, 2000): (Senta and Tschang, 2001). Enhance management and administration of distance education as observed by (Paul, 1990).

1.2 Statement of the Problem

Open and distance learning (ODL) offers enormous potential for Africa, where higher education system face numerous constraints (Gioan, 2007). Yet few studies have addressed ODL in Africa. Open and distance learning (ODL) programs are making substantial contribution to higher education (Harry, 1999). However, the implementation to date is lagging behind expectations (OECD, 2005). ODL may be defined as an approach that aims to broaden access to education and training by enabling learners to overcome temporal and spatial obstacles and by providing flexible

teaching modes that can be adapted for individuals and groups (UNESCO, 2005). African universities must cope with the triple constraints of expanding enrollment in universities, rippling budget cuts, and a soft labor market (Gioan, 2007).

University institutions in Kenya, as elsewhere in Africa, are overwhelmed by major tasks related to access, finance, and quality, internal and external efficiency and are therefore, unable to meet the demand for higher education. In terms of government financial support to public university, it is estimated that since the late 1980s throughout the 1990s, recurrent expenditure declined by around 45% prompting increased commercialization of programs in an attempts to offset the fall in government funding. There is also increased demand for continued education with work and other social responsibilities. Open and distance learning, therefore, is appealing as an option since it relieves the government of the responsibility of constructing or investing in entirely new physical facilities and provides opportunities for continued learning (Nyerere, 2011).

There are administrative and academic problems associated with distance learning in the universities in Uganda. This has an effect on the final output of the students. Examples of such challenges are found at the Islamic university in Uganda, the first private university in Uganda. Dean of faculty/ college of education while addressing the members of faculty/ board, identified some of the major problem facing distance learning in the university were;

1. A sharp reduction in number of students who were on distance learning (BED and DPE).

2. The program was found not to have a dedicated office and responsible person to coordinate it

3.Shortage in terms of financing ICT facilities is one of the factors that affected distance learning in universities as observed by (Bates, 2000), (Berg, 2000), (Meyer-Peyton, 2000), (Orivei, 1994).

Is this situation found only in the private universities or is it also found in other public universities?

1.3 Objectives of the Study

1.3.1 General

This research addresses the Academic, Administrative and Technological Challenges of Distance Learning in Uganda Universities.

1.3.2 Specific objectives

The specific objectives are;

1. To examine how academic factors (teaching, learning and research) influence distance learning in Ugandan universities.

2. To explore how administrative factors (Admission, registration, examination and graduation) influence distance learning in Ugandan universities.

3. To understand the influence of technology on distance learning in Ugandan universities.

4. To establish the challenges of distance learning in Ugandan universities.

1.4 Research questions

This study is undertaken to provide information on the following questions**.**

1. How do academic factors (Teaching, learning and research) influence DL in Ugandan universities.

2. Do administrative factors (A, R, E and G) influence distance learning in Ugandan universities?

3. What is the influence of technology on distance learning in Ugandan universities?

4. What are challenges of distance learning in Ugandan universities?

1.5 Hypotheses

1. Academic factors have a relationship in influencing distance learning in Ugandan universities.

2. To what extent are administrative factors influence distance learning in Ugandan universities?

3. To what extent is technology influencing distance learning in Ugandan universities?

1.6 Research design and methodology

This research intends to apply both the qualitative and quantitative methods to address the research questions and objectives. The methods will allow the different research objectives and questions to be completely explored.

The interviews were conducted on officials from national council for higher education.

Questionnaires were also used as a tool in collecting data from students and lecturers/ Administrators in the five participating universities.

The total population sample size was 461 which is composed of 332 students, 109 administrators and 20 officials from national council for higher education.

1.7 Significance of the study

This study is important because it's hoped to;

1. Investigate how distance learning is managed in Ugandan universities.

2. To contribute knowledge to a large number of Ugandan people and the world at large.

1.8 Definitions of terms

In this section some of the key terms are defined in the way in which they are used in the study. Hence they are working definitions.

Continuing education center –an institution smaller than a school that enables people who stopped learning in regular schools at any lower level of the educational strata to continue with their education.

Formal education-academic schooling done during regular hours of the day and covering a study syllabus

Literacy-knowledge of reading and writing

Learners- student or pupil in school or any other education institution.

Distance learning-is an interaction between the distance educator, the learner and the learning materials.

Academic-concerned with studying books and other resource

Adulthood -is being financially independent, leaving home, completing school and working full-time

Access –to be able reach material for reading

Learners support services-the service provided to the distance learners

Cost of education- the amount of money paid by learner for either tuition, reading materials, travel and other expenses concerning learning.

ACCEL model – principles that can be used as basic guidelines for management and development of open and distance learning

Chapter Two

Literature   Review & Previous Studies

2.0 Introduction

This chapter is intended to make a review of some previous studies related to this study. It will give the study an in depth of distance learning to enable the current study clearly get to the real challenges facing Distance Learning in Ugandan universities in general.

2.1 Distance learning

Distance education, or distance learning, is a field of education that focuses on the pedagogy, technology, and instructional systems design that aim to deliver education to students who are not physically "on site". DE "refers to approaches to learning that focus on freeing learners from constraints of time and place while offering flexible opportunities to both individual home-based learners and groups of learners in remote class- rooms (UNESCO, 2010). Distance learning being open means that a learner or a group of learners can access the learning opportunities without being restricted to place or schedule of learning program (Olugbenga, 2006). Demand for university education worldwide continues to rise, in the same way as competition for access, as new groups of candidates complete their secondary level of education and aspire to join universities. Globally, universities are faced with a challenge of meeting the demand for university education. Any nation's effort in economic, social, political and technological development depends mainly on its ability to make education accessible to its citizens (Arikpo et al., 2008). According to (Nyerere et al., 2012) the number of students seeking university education is expanding faster than educational institutions' capacity to accommodate them through the residential mode. It is against this

background that Universities are forced to quickly make a shift from the traditional mode of teacher- centered characterized by lecturers and students interacting on face-to-face basis alone, as new sets of candidates complete their secondary level of education and transit to universities. Distance learning is traced back for its existence in history for more than a century. The journey of distance learning started with letters sent by mail and developed through radio, television, video conferences and web-based applications over time. The adaption and leading in this technology is undoubtedly significant in terms of developments in educational activities in the world over. The innovations that came along with distance education model have made significant contribution to the formal education. Many educational institutions have adopted this model (Akmeşe et al., 2016). According to (COSKUN, 2007) key important aspects that are considered in defining distance education in terms of teaching method where;

-It consists of individuals who have not had an opportunity of setting traditional teaching methods.

-Teachers and students are in different environments,

-The time and age of learning is flexible,

-It is composed of specially created units and materials,

-Technologies such as printed materials, radio, television and Computers are used as teaching tools,

-High level communication is provided between the teacher and students.

In addition, open and distance learning is a method of education in which the learner is physically separated from the teacher. Teaching is not conducted through face-face tutorials, but through course materials in text, audiotapes, video, computing facilities and so on. Hence, the planning, organizing and controlling of the development,

production, distribution and use of the various forms of media is a significant part of the task facing administrators in open and distance learning (Tsui et al., 1999). Open and distance learning (ODL) has been defined in different ways and at different points in time: According to the Commonwealth of Learning (Common wealth of learning, 2005), ODL is a learner-oriented system that allows greater flexibility in learning while students continue with their regular work. ODL is founded in view of the physical limitations imposed by the traditional mode of delivery. (Onyemaechi, 2013b) urged that the definitions have three things in common: flexibility, cost-effectiveness, and learner-centered. Further observe that Open and distance learning can be defined as a flexible, cost-effective, and learner-centered educational system. It is learner-centered as it aims at providing answers to academic questions and problems of learners, not the other way round. (Butcher et al., 2011) observed that distance learning hold particular educational promise for Africa, where Universities are facing many challenges such as rapidly expanding enrollment, tight budgets, overcrowded classrooms and dismal job prospects. (UNESCO, 2010) established that university education in Africa is lagging far behind in comparison to the rest of the world; the gross university enrollment was 26% worldwide in 2007, it was only at 6% in sub- Saharan Africa. Distance education is hoped to mitigate a long standing and problematic trend in Africa (Muhirwa, 2012). It will check on the African professionals from to the North after graduating (World Bank, 2009).This situation is termed as "brain drain" as stated (Freitas et al., 2012) Distance education can bring a radical change, since it allows learners to enroll in programs administered from outside their social-cultural environment while remaining at home, facilitating skills reinvestment within local communities (Jacquinot, 1993); (Moughli et al., 2008). According to (Mufutumari, 2010) DE has the potential for addressing the critical need for training of qualified African workforce, as well as socio-professional potential for building a qualified African workforce. However, it is sad to note that progress has

been hampered by number obstacles; substandard computer equipment, disorganization, and lack of professional skills (Basaza et al., 2010): (Visser-Valfrey et al., 2012).

Open and distance learning has been viewed by society in anticipation of the following aspects as outlined by (Van den and Schlusman, 1989), thus; education being less expensive, reduce pressure on the overcrowded traditional universities, enabling more people to study as they work, encourage people gain more qualifications and opening up access to university for students without formal entrance qualifications. According to (Lentell 2012 and Rajasingham 2011) host governments have encouraged institutions to develop distance learning programmes. Universities have in recent years been faced with significant decreases in government funding, a slump in donor funding due to economic recessions, an exponential demand for higher education both from the working adult and the youth, the changing nature of knowledge and the rapid advances of ICT. (Nyerere et al., 2012) observed that education systems are in continuous search for new ways of effectively responding to the changing needs of global students. One seemingly ready solution adopted by institutions towards the foregoing challenges is the provision of education through distance learning.

Distance education is practiced in all parts of the world to provide study opportunities for those who cannot or do not want to take classroom teaching (Holmberg, 1995).

In its earliest form, distance education meant to study by correspondence, or what is now called "snail mail". As new technologies developed, distance instruction was delivered through such media as audiotape, videotape, radio and television broadcasting and satellite transmission.

Microcomputers, the internet and the world wide web while shaping the current generation of distance learning, and virtual reality, artificial intelligence, and knowledge systems may be next (Kerka, 1996). (Keegan, 1996) asserts that instructors

and learners are virtually separated during the period of learning but the technology is used to bridge the separation. Further adds that learners are supported during the process to prevent them from dropping out of the learning process. Distance education program may organize special time for residential classes to provide an opportunity for learners to interact and socialize personally through technology with the purpose of clearing out the perceived and actual learners' isolation during the learning period.

(Chang, 2013) noted that education institutions have been providing distance learning programs for traditional and nontraditional learners for a number of years. However, as the rate of enrollment rises, so do the numbers of distance-learning dropouts. Research showed that dropout rates in distance learning were between 50% and 80% (Flood, 2002, Soilen, 2007). Some researchers maintain that blended and traditional learning are superior in terms of student persistence and retention. According to (Dziuban et al., 2004), Blended courses have the potential to increase student learning outcomes while lowering attrition rates in comparison with the equivalent fully online courses. (Gakuu, 2006) argued that many universities introduce learning initiatives without first establishing the critical factors in the working environment which would enhance the adoption of DL. Distance learning adoption in universities depends on the environmental factors facing the lecturers, which is a key element in any kind of education system, and should never be taken for granted because the failure or success of the program depends on them. DE thus attempts to meet numerous and varied needs of students. Yet, distance students now indicate that distance has caused isolation from peers, teachers and faculty and that they are missing out on interactions, cues and immediate feedback. They have indicated that while they appreciate geographical distance, they would prefer a shorter transactional distance (Moore, 1993).

Following the development of electronic media, distance educators started using broadcasting to deliver course materials. Satellite technology was developed in the 1960s and enabled the rapid expansion of instructional television. For example, "The

first state education satellite system, learn/ Alaska, was created in 1980. It offered six hours of instructional television daily to 100 villages" (Simonson et al., 2011a). The use of modern communication technology in education, with continuous improvements and adaptations, has renewed the impetus in education participation not only for DE but also in traditional face-to-face education systems (Lane, 2012.) and (Lane, 2011.).

2.2 Models of Distance Learning

There are numerous models of DE which a university can benchmark to institute distance learning programmes (King, 2012). One model of managing DE programmes is based on organizational theories. A DE system founded on organizational principles could benefit from industrial models of operation (Daniel, 2012.), (Lentell, 2012.) and (Keegan, 1980.). According to (Rangara, 2015) successful DE programmes should have a strategic plan, organizational system, policies and resources that support not only the teacher and the student but also the institution and all other stakeholders. All parts of the system should be collaborated in order to service a smooth implementation and running. Learner support should be an integral component of the DE system. DL systems are mainly supported by technology which change over time and hence require updating. (Baggaley, 2011) observes that the internet (a modern driver of DE) is posing serious challenges to the policies and practice of DE in ways that are yet to be understood. According (Baggaley, 2011)"no innovation has marched so quickly and so confidently into the field of learning" with irreversible and adverse effects. Yet, with no end in sight for ongoing innovations, planners are unable to stabilize their strategies and by extension DE policies. There is urgent need for DE to have clear policies for the definition of DE practice. This is because every practice by professional definition must have a clear domain of concern and a philosophical boundary. (Moore et al., 2011.) observed that it is no wonder that

judging from all the names by which it is referred, DE is suffering from an identity crisis.

Print Based Distance Education

Many of the large-scale distance education programmers in the faculty of external studies, university of Nairobi can be classified as print (paper) based distance education. This does not imply that there are no other support components built into the course, but points to the fact that print materials is the primary delivery strategy. The print materials are in the form of study lecture units, course notes, and practical guides (Bukhsh and Chaudhary, 2015). Research and evaluation activities are very limited in BOU. As a result, no much revision is being made with the study materials. Once it is produced, reprint of the same dummy is going on year after year. Sometimes few corrections are made with some course materials, which does not improve the contents of courses at all (Sadia and Mostafa, 2002).

Institution – Based Model of Study

This mode of study includes the full-time residential mode in which students in the program study with the rest of regular Kenyatta university students or in their own groups, and the full-time institution based mode in which students opting for this mode should be in employment with any education institution, preferably primary or secondary school during the entire period of study. Such students are required to attend residential sessions at the university during the vacation period of August, December and April for a total period of not less than 14 weeks per year and institution based guidance under the so-called quality assurance of 72 hours per academic year (Igbokwe, 2015). Management and policy play a crucial role in the success of ODL programs. There are a number of differences exist between the teaching and learning styles of traditional instruction versus a distance scenario and thus management and

policies of instructing institution should be changed to address those differences. According to Boettcher and Conrad (1998) discuss the ACCEL model as it concerns distance and open education. The ACCEL model is made of principles that can be used as basic guidelines for the management and development of distance and open education. ACCEL is explained as follows;

- Active
- Collaborative
- Customized and accessible
- Excellent quality
- Life style fitted.

Examination consists of coursework assessment, assessment of practicals, which contributes 50%, and one final university examination, which contributes another 50%. At least all the units are examined by the end of the semester in session in which they are taken (Matovu, 2012).

Mixed Mode Provision

Mixed mode programmers such as the 'parallel' degree course offered by the University of Nairobi use a combination of face to face and distance learning strategies. Other diploma courses offered by universities in Kenya, particularly post-graduate diplomas in education, community health and others are good examples of mixed mode (Nyerere, 2011). Furthermore, due to blended learning, there is a very thin line between the on-campus and the off-campus student (Marshall et al., 2012.). These complications, notwithstanding student needs, have to be identified as a baseline for planning and providing learner support services. According to (West, 2011), DE has total reliance on learner autonomy, also referred to as independent or self-directed learning. Independent learning is the degree of independence of the student from the instructor.

2.3 Theories of distance learning

Distance education evolved through the contributions of distance education theorists such as (Peters, 1983); (Holmberg, 1983); (Moore, 1973) (Garrison et al., 2000); (Birochi, 2011) and several others. The main purpose of distance education is to provide education to all people who would otherwise not have had the opportunity to attend tertiary education (Letseka and Pitsoe, 2014); (Makoe, 2011.); (Ngubane–Mokiwa and Letseka, 2015). These theoretical frameworks serve as ways through which the distance education is better understood. Distance education is believed to be on the same level as campus–based institutions in terms of respect and recognition. Campus-based institutions have recently started to introduce distance learning modules in some of their courses. According to (Chatterjee, 2009) report that two recent surveys of North American tertiary institutions found that 66% of those institutions offer some form of distance education. Equally, in South Africa, some campus-based universities such as the University of North–West, the University of Kwa-Zulu Natal and the University of Pretoria also offer distance learning in some selected modules (Department of Higher Education and Training, 2013). Distance education at its inception started as correspondence education, where the students received study material by mail and there was very little communication with the teacher and the institution as observed (Aoki, 2012); (Heydenryck and Prinsloo, 2010.). With the advent of massification in higher education, higher education institutions could not cope with the student applications because of the resource challenges. Within the context of social justice, governments were also forced by their social mandate to open the doors of learning to all people who needed to learn. Consequently, distance education evolved from the "organizational and distance concerns to the transactional and educational issues" (Garrison et al., 2000).

Various theories of distance education have been proposed, some based on ideological, some on philosophical and some on empirical bases (Rekkedal, 1994) and (Sherry, 1996b). The following theory is summarized to give an idea of the main feature because distance education (from which distance learning results). This theory has been selected because it is based on a breadth of empirical studies and has evolved over time. This does not mean that it is based on this particular or any other particular theoretical model of distance learning.

The theory of transaction distance (proposed by Moore) is based on empirical studies in the field of distance learning and education (Moore and Kearsley, 1996). In it distance education is considered as a teaching-learning relationship. The learners, teachers and educational organizations have to develop procedures to overcome their separation, which is not only a physical distance but also distance of understandings and perceptions, that is, a transactional distance.

During the 1970s and 1980s several theoretical frameworks were proposed that aimed at being comprehensive and encompassing the whole area of distance education. Among them, (Amundsen, 1993) identified six theorists as having provided the most notable contributions to the field. Five of these six theorists have been highlighted in Table 1.

Table 2.1 Distance Education Seminal Theories (Adapted from Amundsen (1993, ap.71)

Authors	Theory	Central Concepts	Primary Focus
Otto Peters (1983)	Theory of distance education as the most industrialized form of education	Industrial and post industrial	Industrialized education
Michael Graham Moore (1973)	Theory of transactional distance and learner autonomy	Transactional distance (dialogue and structure); learner autonomy	Distance
Borje Holmberg (1983)	Guided didactic conversation theory	Motivation; empathy; non-contiguous communication; learner autonomy; Interpersonal communication	Distance
Desmond Keegan (1986)	Theory of reintegration of the teaching learning acts	Reintegration; intersubjectivity; two—way communication	Communication
Randy Garrison (1985; 1987)	Theory of communication and learner control	Inseparability of technology collaborative; educational transaction; self-directed learning; adult education.	Communication

(Peters, 1983) seeks to analyze production processes of industrial and post-industrial society which impact education. In addressing industrial society, distance is treated within the perspective of new teaching institutions. Under this model, the predominance of production processes overrides the interests of individuals who are subject to these processes. The dehumanized relationship among teachers, students, and content is a feature of industrialized society analyzed by peters. The impersonal and standardized relationships are highlighted. In the context of an industrial society, educational processes are close to production and assembly-line processes, characterized by a Ford-ist manufacturing model. In this model, geographical distance is not a key driver. The determinants which govern the new organizational practices are represented by the mode of production in industrial society. Distance between teachers and students and a student is regarded as a business opportunity for the teaching institution to achieve a large volume of students who are geographically dispersed. In this context, serial production processes carter for the characteristics represented by a standardized and large –scale type of education.

Concerning the post-industrialized perspective, (Peters, 1983) regarded distance as a barrier which can be surmounted by more finely tailored technologies and decentralized decision-making structures. Processes among educational agents can be brought closer together so as to render relations more humanized. This process of drawing agents closer together through the use of technologies is also regarded by (Keegan, 1993) as a re-integration of teaching and learning acts. That is to say, the geographic distance between teachers, students, and content in post-industrial society tends, gradually, to be transcended by increasingly sophisticated technological processes. This occurs to point where the notion of spatial distance begins to disappear altogether as analyzed by more recent theorists (Garrison, 2000). The predominance of teaching and learning relationships overshadowing distance between them renders the physical distance between agents irrelevant.

New technologies allow the relationship between teaching and learning, mirrored in face-to-face models, to be restored since the agents can interact, collaborate and share with each other. The notion of distance per se is increasingly absent in distance education studies. Other terms take center stage, such as "medicated education" or "technology-mediated education" (Kanuka and Conrad, 2003). The rubric "education" dimension carries more weight than the term "distance education". Theorists stress the importance of teaching and learning which may be enhanced by the two-way communication resources, as reported by (Keegan, 1993) and (Garrison, 1989). Likewise, within the new era of technology teaching, the industrial theory acknowledges the values of online learning, that it is a product and consequence of industrialized learning (Peters, 2007) within the distance environment. (Birochi, 2011) argue that the distance in online learning can be overcome by more finely tailored technologies and decentralized decision-making structures. (Peters, 2010) concurs as he pleads for a presence of an oral dialogue in online leaning; that the absence of a teacher's voice in online learning affects to some extent the will to learn amongst some less autonomous learners. This understanding of the industrial theory displays to some degree some relationship with the transactional distance theory of Moore and the Guided Didactic Conversation theory of Holmberg. (Peters, 2014.) identifies various obstacles that might affect online learning such as accessibility to online learning technologies and the possible disregard by some enthusiasts of digitilization regarding student needs and the principles of pedagogics. (Peters, 2014.) is of the view that instructional design be given preference to the nearly excessive interest in technical innovation, which could lead to a success of online learning.

Of the theorists analyzed in the present study, two deserve special attention in relation to the analysis they performed based on the concept of distance: Holmberg and Moore. (Holmberg, 1995) coined the term "noncontiguous communication" to describe communication which takes place in the relationship between educational agents who

are physically separated by time and place. The communication process is of two kinds: one-way traffic, in the form of pre-produced course materials sent from the supporting organization and involving students in interaction with texts, recording and data bases, which can be described as simulated communication, and (2) two-way traffic, i.e., real communication between students and their supporting organization, in writing, on the telephone, by fax or email (Holmberg, 1995).

Holmberg's theory hinges on the fact that teachers and students are physically separated and seeks a means of remedying this fundamental gap between them. Holmberg believes it is feasible to recreate the teaching and learning environment of traditional classroom by use of various strategies. He selects a number of hypotheses based on several variables, such as interpersonal communication, which should serve as a means of rebuilding dialogue between teachers and students (simulated conversation), whereby communication process would also present at the educational structure level (communication materials and methods: printed materials, written comments by the teachers etc.), in a bid to restore the link between teachers and students in the teaching and learning process. In this sense, the crux of his analyses and his theoretical proposal centers on the concept of distance. (Holmberg, 2005) defines education as the various forms of study that are not under the continuous immediate supervision of tutors (and presumably also lecturers) present with their students in the lecture rooms. It facilitates communication between students, lecturers and tutors, to make use of study materials. In the recent times, distance education has moved fast from correspondence education to Web-based delivery of education. (Nickel, 2010): (Holmberg, 2005), observe that internet and World Wide Web broadened the scope of conventional distance education to anywhere at any time. Integration of new types of educational technologies allow flexible learning and increased potential for interaction and access to a wide clientele and global market. (Esterhuizen, 2015) and (Zhang et al., 2015) argue that in distance education, teaching

is supported by the use of electronic learning management systems. This is especially relevant to 21st century distance education institutions.

Akin to Holmberg, (Moore, 1973) also grounded his theory in the concept of distance. For Moore, transaction distance is a combination of two variables: dialogue and structure. The greater the dialogue between the teacher and student, the shorter the transactional distance between them. Similarly, the lower the interference of structure-related processes in the teaching and learning relationship, the shorter the transactional distance. According to Moore, transactional distance can also play a role in a face to face teaching setting. However, transactional distance takes center stage in the distance education setting where physical distance between agents is greater. The psychological and communication space which permeate the relationship between the agents, and which characterize transactional distance, actually gain a new interpretation in the processes of teaching and learning as set out in Moore's approach. Moore's transactional distance theory is an all-encompassing theory compared to all the other theories of distance education. It can encompass both the organizational, in terms of structuring the course and its distribution of the transactional issues without losing sight of the learner, the institution and the nation altogether. It is a global theory that carries the stem cells of other theories and can be proved by the way the thinking of all the other authors seem to be redirecting their work towards Moore's thinking–that is, the organizational synergy is moving firmly towards the transactional (Gokool-Ramdoo, 2008). Among the other factors that make the theory of transactional distance to be the dominant theory as compared to the other three theories discussed above are: firstly, many researchers view it as a basic analytical framework for understanding distance education systems; secondly, researchers often cite the need to reduce transactional distance; thirdly, the theory is assumed 'true' and is taught at institutions of higher learning (Gorsky, 2005). In addition, the theory of transactional distance's "main concern is to understand the factors that produce the communication gap

between the teacher and the learner within the distance learning environment (Moore, 1993); (Moore and Kearsley, 2012) Concerning learning using technology, students have to learn how to study through technology, how to communicate for learning – which is not always similar to what they do socially (Moore and Kearsley, 2012) state that "in all education there has to be communication between a teaching organization and a learner. They go on to say that in distance education, this communication takes place through some kind of technology. In transactional distance, Moore advocates for a relationship between the teacher-student, student-subject content and students-students. That with the mediation of these relationships, learning takes place effectively in a distance-learning environment. Moore (1993) therefore emphasizes that the extent of transactional distance is a function of the three sets of teaching and learning variables which are; dialogue, structure and learner autonomy. Consequently, the teaching and learning relationships can become more or less effective depending on how these variables are handled (Birochi, 2011); (Moore and Kearsley, 2012) .According to (Moore, .1991) distance of understandings and perceptions is caused by the geographical distance, which has to be overcome, by teachers, students and the institutions if effective learning has to occur. (Makoe, 2012.) argue that in the transactional distance, the patterns of students and teacher behavior are affected and impact on pedagogy, where the structure of the educational program and the quality of interaction between the teacher and student determines academic performance. (Moore, .1991) noted the distance is found in both distance education and face-to-face learning, although it is more prevalent in a distance learning environment, because of distance education's characteristic of separation of one from another, which requires a set of special teaching and learning behavior. (Moore and Kearsley, 2012) state that "in all education there has to be communication between a teaching organization and a learner. They go on to say that in distance education, this communication takes place through some kind of technology. Communication is of various degrees and the extent

of communication that takes place depends on the personality and philosophy of the course instructor and that of students (Moore and Kearsley, 2012). (Moore and Kearsley, 2012) asserts that "the success of distance education is determined by the extent to which the institution and the individual instructor are able to provide the appropriate opportunity for and quality of dialogue between teacher and student, as well as appropriately structured learning materials." Moore advocates for a relationship between the teacher-student, student-subject content and students-students. That with the mediation of these relationships, learning takes place effectively in a distance-learning environment. (Moore, 1993) therefore emphasizes that the extent of transactional distance is a function of the three sets of teaching and learning variables which are; dialogue, structure and learner autonomy. Consequently, the teaching and learning relationships can become more or less effective depending on how these variables are handled (Birochi, 2011); (Moore and Kearsley, 2012). Instances where the course instructor requires of students to assimilate information by listening and taking down notes, the course becomes highly structured and dialogue becomes limited (Moore, 2013.). He also argues that in a course where more dialogue is required, the course becomes less structured and dialogue takes place between the teacher and students and also among students themselves. (Moore, 1993); (Moore, 2007) states that effective learning takes place through the interaction between these three variables. The student is at the centre of the interaction. The interaction between the variables mentioned above is a transactional relationship, which is fundamental to effective teaching and learning in distance education. (Moore, 2013.) argues that "Dialogue is a particular kind of interpersonal interaction, and it happens after a course is designed, as teachers exchange words and other symbols with learners, aimed at the latters' creation of knowledge"; it takes place when one gives an instruction and the other responds. Dialogue is therefore constructive interaction that is purposeful; also it is the means by which interaction between the teacher, student and content takes

place (Moore, 2007). He also argues that it helps to facilitate teaching and learning. Moreover, the extent of its value in teaching and learning is "determined by the educational philosophy of the course designers, the personalities of the teacher and learners, the subject matter of the course and environmental factors" (Moore, 1993) . Likewise, the media used and the personality of the teacher and learners also contribute to determining the degree of dialogue (Moore, 1993). The success of distance education is determined by the extent to which the institution and the individual teacher are able to provide the appropriate opportunity for and quality of, dialogue between the teacher and learners"(Moore, .1991).

2.4 Distance Education in Uganda

Distance education in Uganda has evolved over time. In the 1960s Uganda witnessed the establishment of correspondence courses in addition those Ugandans who registered with the British correspondence colleges and got a general certificate of education (G C E) or Cambridge qualification. Since that it has had a steady growth though with challenges. Indeed Uganda has realized a steady growth in the development and redefining the provision of distance learning in the country as observed (Aguti, 2000a): (Nsamba, 2004): (Bbuye, 1999). The late 1970s and 1980s was a period when the country was engulfed into civil wars and no serious work was done towards the growth and development of distance education. The 1990s saw the rejuvenation of Distance education through donor funded projects.

Uganda moved on to start distance education projects in teacher training. In January 1992, Mubende and Kiboga districts launched the Mubende integrated teacher education project (MITEP) so as to train its untrained primary school teachers. The success of this project led to the launching of the Northern integrated teacher education project (NITEP) with the aim of training untrained primary school teachers in the northern region of the country. This project was successful. The former institute

teacher education, Kyambogo (ITEK) now Kyambogo University, is now running it as a national program. The same applies to the teacher development and management system (TDMS) that was also launched as a pilot project this time for the training of head teachers. TDMS wound up as a project and the program is now also being run by Kyambogo University as a national program (Aguti, 1996),(Aguti, 2000b).

Makerere University, the oldest university in the country, also launched an external degree program (EDP) in 1991. Under this program, two undergraduate degree programs are currently being run Bachelor of commerce (B. com) and Bachelor of education (B.Ed.). The B.Ed. is a program meant to upgrade diploma teachers to Bachelors level. The Bachelor of Science (B.Sc.) degree has also been launched.

There is growing interest in the private universities also in distance and open learning. Uganda Martyrs University for instance is already running a diploma in education course from 1992/93 onwards crash programs for training and retraining teachers were mounted. Increased enrolment and training teachers will be undertaken through the in-service system, training on the job and long distance for primary school teachers, (The government of Uganda, 1992). This program like the one being run at Kyambogo University is aimed at giving primary school teachers with grade III level teachers' certificate, an opportunity to upgrade themselves and obtain a Diploma. Learning has shifted from teacher centre to learner centredness, and as such that attention of the learner can be regained by pushing the learning environment to where the attention of the learner lies (Kasse et al., 2015).

It is therefore clear that Uganda has keen interest in the use of distance and open learning for the education of its citizen. Uganda has particularly used distance and open learning for training, retraining and upgrading its teachers.

The National Universities Commission observes, however, that a critical appraisal of the scope of the practice of open and distance learning at any level of education in

Nigeria against the backdrop of the long-standing recognition of its potential for increasing access to education reveals some mismatch between policy and practice. With respect to open and distance learning education, the national policy specifies that the open and distance learning mode of education shall not be applicable to academic disciplines in a university that lacks capability for such discipline (Onyemaechi, 2013b).

2.5 Academic factors that influence distance learning

By creating a comfortable learning online community through online learning, student satisfaction online course availability could continue to grow at an explosive and successful rate, creating new opportunities for more students to participate in desired academic development. Good distance learning courses result from institutions that provide quality course support systems for students and instructors. (Corry, 2008) suggests that support systems can be divided into three different areas; Academic support, administrative support, and technical support. Academic support involves instructors providing substantive engagement and feedback for course activities. Administrative support involves things such as financial aid, advising, registrar services etc. For schools using technical systems to deliver education, it is not a matter of whether a student will have problems; it is a matter of when they will have problems. Academic, administrative, and technical support services should be evaluated regularly as a part of the course evaluation. In addition, evaluation data should be made available to the appropriate stakeholders to ensure accountability and ongoing improvement substantive engagement and feedback for course activities. A learner support mechanism endeavours to address the student's requirements that may affect his/her learning including career and course choice guidance, preparatory needs, study skills, access procedures to seminars, psychosocial needs, collaborative and group discussions, guidance on tutorials, learning materials, assessments and writing of

assignments. It also includes guidance and counseling on non-academic issues (Tait, 2000.) and (Keegan, 1995). A breakdown of the functional systems of DE within any institution underscores five interdependent fundamentals: i) the mission and vision of the institution, ii) the student, iii) faculty, iv) course design, curriculum and learning issues, and v) instructional and learning resources. A breakdown in one will most often affect all the others (Lentell, 2012.).

(Simpson, 2000) considers support as all activities that are needed beyond the production and delivery of course materials that assist in the progress of students in their studies. He argues that this can be divided into two broad categories, namely, academic (or tutorial) support which deals with supporting learner with the cognitive, intellectual and knowledge issues of specific courses or sets of courses, for example, developing general learning skills, numeracy and literacy. Other support is non-academic (or counseling) support – that is the support of learner in the affective and organizational cycles of their studies (Simpson, 2000). (Willis, 1994) argue that meeting the instructional needs of students is the cornerstone of every effective distance education programme, and the test by which all efforts in the field are judged. Regardless of the educational context, the primary role of the student is to learn. This is a daunting task under the best of circumstances, requiring motivation, planning and an ability to analyse and apply the instructional content being taught. (Mattson, 2004) observed that distance learner is alone most of the time and has limited interactions with his/her tutor or peers. They need help most of the time to support their studies. It would, therefore, be imperative to provide varieties of support services by the institution for the distance learner to ably enhance his/her effective learning. According to the report (1997:14) of the final evaluation of the Northern Integrated Teacher Education Project (NITEP), the International Extension College (IEC) argued that the success of the project depended equally on the quality of the study modules and of the closed student-teacher support network made available to the learner. The

student-teacher support is indeed the most difficult to implement and supervise and is by far the most expensive part of the system. For effective administration of such support systems (Chale, 1997), observe that it is absolutely necessary to keep co-coordinating regional centres in place to monitor and provide for the needs of the distance learner. According to (Perraton, 2000), the greatest challenge to Distance Teacher Education Projects in Sub-Saharan Africa, and the first condition for success is "to set in place effective arrangements to support students and, in particular, to supervise their classroom practice". According to (Chale, 1997), the provision of quality learner support services was embedded in the centralized/ decentralized organization of the University and manning levels. It was designed to have a small but highly competent cadre of permanent academic, administrative and technical staff at the Headquarters and at the zonal/regional centres. Some decision-making powers/processes should devolve to the periphery.

(Bunk et al., 2015) observed that in a survey conducted by (Allen, 2012) of 4,564 university faculty shows faculties are especially pessimistic regarding the quality of online education. Nearly two thirds reported that they believe online learning outcome are inferior or somewhat inferior compared to traditional face-to-face classroom. A similar survey by the Ontario confederation of university faculty association (2012) reported that 80% of faculty either disagreed or strongly disagreed with the statement "in my opinion, online education is an effective substitute for the traditional classroom experience". (Oluniyi, 2012) stated that, there is a widespread perception among faculty members, students and the general public that e-learning is ineffective and that the quality of instruction is not comparable with that in live classes. He (Oluniyi, 2012) noted that, there is friction due to conflicts of interest between the Centre for distance learning (CDL), responsible for coordinating all part-time programs, and the cognate departments responsible for teaching; the working relationship between the sides is often cold. While the CDL performs administrative work, the cognate departments are responsible for academic activities.

(Oluniyi, 2012) said that, the fear expressed by students concerning the lack of face-to-face interaction with fellow students shows the need for cooperative learning and peer group interaction among the students. Most of the students hold the opinion that the teaching may not be effective. This is one of the myths regarding e-learning.

In a study conducted by (Musingafi et al., 2015a) on the challenges for open distance learning students, he observed; most of the respondents (95%) received study materials late or never got them. In this situation, students are affected academically, psychologically, and financially. Delayed or lack of study materials may affect student economically as they waste resources in terms of money and time; patiently

waiting for the arrival of study materials and sometimes travelling to regional center to make follow-up, but find nothing.

Assessing student performance is a problem area in distance learning. It is commonly held belief that distance students perform more poorly in assessment than internal students because of the additional pressure and burden of distance study (Attri, 2012).

The mode of delivery in distance learning varies however, in the study conducted by (Dea Lerra, 2014) found out that majority of the stakeholders strongly agreed that tutorial classes, though are not being regularly held by expert tutors, are very helpful to them. The tutors and some learners, of course underlined the need for making the tutorial classes compulsory.

The quality of facilitators in distance education impacts a lot on the trust students develop for those programs and institutions.

In the study conducted in south Ethiopia, (Dea Lerra, 2014) in the findings revealed that about 62% of the tutors hold MA/M.Sc. degree. The remaining 32% of the respondents were qualified first degree level. And three PhD holders included in the sample were appointed as tutors in the area of Hawassa and Arba Minch. According to the results, only 14% of the tutors were females, and the majority of the respondents were experienced instructors with length of service of more than five years.

(Kangai and Bukalira, 2011), observed that, one of the main attractions to teacher education at a distance is that the mode has the potential to effectively train teachers without taking them out of the classroom. Despite this great advantage in teacher education at a distance, there are problems, one of the main ones being the assessment of teaching and classroom performance in schools. This is in line with

UNESCO which observed that, improving the quantity of teachers will not be enough; quality needs improvement, too, with teachers well trained and motivated. Many countries have expanded teacher numbers rapidly by hiring people without the proper qualifications and training (UNESCO, 2015).

The training of staff and coordinating centers largely affects the students in distance education. Teachers' skills development in DL is very vital as observed by (Venkatraman et al., 2018) that teacher competency research is a growing field and it considers that the knowledge and skills of the teachers are of importance for the success of teaching and learning process.

(Dea Lerra, 2014) stated that the center coordinators are not properly trained to pay attention to problems such as, lack of information on the tutorial time/ schedule, too far residence from the tutorial center, lack of time to study the materials in advance of tutorial sessions and absenteeism from the tutorial sessions for unknown reason and other critical challenges of distance learning.

In a study done by (Basaza et al., 2010), observed that, most of the university lecturers do not have a background in education or in instructional and learning methodology. Instead, they have degrees in various subjects and are hired by universities on that basis. Some have obtained guidance about how to teach in a face-to-face setting from colleagues, but very few have experience with distance education instruction and learning strategies. (UNESCO, 2015) argued that teachers are the key to achieving all of the Education 2030 agenda "As teachers are a fundamental condition for guaranteeing quality education, teachers and educators should be empowered, adequately recruited and remunerated, motivated, professionally qualified, and supported within well-resourced, efficient and effectively governed systems. Therefore, training of teachers at all levels to be

equipped with skills must be given priority by the planners and managers of education."

(Dea Lerra, 2014) observed that students were not conscious about completing the assignment. It is observed that students copy the assignment answers from each other. Moreover, the handwriting was often not legible, and it was time consuming to read and score properly. Delay of submission of the assignment and lack of guidance given to trainees about the assignment are few of the problems of the current distance education system. (Mcclary, 2013) argued that instructors should be ready to use the tools available for DL courses. Lack of faculty training on distance learning platforms and other modes of delivery create a challenge in DL. (Owusu-Mensah et al., 2015) observed that various researches noted that ODL creates new demands on both the teachers and learners. Distance learning staffs are not equipped with necessary skills; it can lead to high dropout rate among distance learners. OWusu-Mensha et al, (2015) cited (O'Rourke, 1993) who stated that staffs are in direct contact with learners, in teaching, tutoring and student support roles need to be at ease with adult learners and their dynamics, understanding the administration and organization of DL systems, the required resources and scheduling of DL course delivery. They should be able to communicate equally with clients, learners and with teaching and administrative staff within the institution to address problems and issues of concern to help resolve them. The success of DL program is tied to the availability of distance learning instructional materials that are enough for the learners and suitable and designed for self- instruction by the learner (Gbenoba and Opeymi, 2014). According to (Common wealth of learning, 2005) learning materials should state, the learning objectives and tasks the tasks broken down into small steps. Learners should be assessed against the stated learning objectives and tasks should reflect the learning objectives. Learning materials should be grouped into small, meaningful pieces,

Learners should be addressed directly and have a generous layout for learners to write what they should include, a study guide on how to use the materials and how study by self. According to (Cochran et al., 2014), factors like socio- economic background and financial worries, role identity and self-belief influence the student's ability to fit-in and persist in the programme. Thus, being at risk of dropping out should be informed by other factors in addition to academic background. This framework referred to as learner support should be integrated into all facets of the student's experience as well as a structured service accessible throughout the student's journey (Shillington et al., 2012).

2.6 Administrative factors that influence distance learning.

(Brown et al., 2O15) noted that distance education learners study while juggling with other responsibilities. Not surprisingly many of the participants he studied were studying while in some form of employment or responsible for the care of dependents. For some, juggling study with full-time work proved incredibly taxing. In some instance with in the first few weeks of semester, most students begin to report feelings of being torn between the pressure of work and study. Provision of health services in coordinating centers, there should be health services provision or some contingency to cater for health problems of students during their stay at Virtual and open distsance learning (VODL) centers as the coordinators run into problems when there is a health problem of student (Dodo, 2013b).

(Attri, 2012), (Basaza et al., 2010) suggests that, there is need to devise ways and means to improve upon the external and internal environment of distance education system to avoid stagnation and generate dynamism and development to reap the potential of this system.

In the current DL, lack of appropriate academic support for individual candidates, problems of module distribution at the appropriate times, lack of academic feedback before the final (term-end) exam, failure to assess needs and workload, and poor or not well prepared/ organized learning modules are among the critical problems of DE. (Simonson et al., 2011b) identified some barriers to successful implementation of ODL as; lack of funds to implement distance learning programs, Organizational resistance to change, lack of vision for distance education in the organization, lack of support staff to help course development, Difficulty keeping up with technological changes, lack of infrastructure or support. According to the innovation adoption framework (Wisdom et al., 2014), observed that the external environment, which may include policies, funding and infrastructure, are necessary for adoption of an innovation. (Aarons et al., 2011), note that research findings show that external policy and regulations are positively associated with innovation adoption.

(Dea Lerra, 2014), noted that lack of appropriate attention to the program by the concerned bodies should be the special feature of DE. (Watiri, 2013) argue that student attrition is one of the emerging challenges in distance learning programs. (Moore and Kearsley, 1996) argued that distance learning students experience many barriers to learning such as; lack of study rooms within and outside the university, lack of feedback or contact with tutors, lack of support services, alienation, lack of finances to make copies of learning materials and inability to meet the cost of travel, lack of time to study, demands from the employer, and poor reading and note taking skills. (Simpson, 2002) stated that learner support constitute educational and non-educational support. All core aims of support of a student in distance learning are cognitive, affective and systemic (Commonwealth of learning, 2004, Tait, 2003). According to (Panagiotis, 2010) distance learning students are vulnerable regarding the application of the acquired knowledge, hence a cordial relationship should exist

between the learners and instructors that facilitate them to learn and overcome all other problems that may affect their academic life. (Donkor, 2012) argued that the primary role of tutors is not only making learning materials more understandable but also to encourage and motivate students by using assignments to support tutoring, devise ways of encouraging interaction among students, aid students to improve academically at all times be in tune with the learners' characteristics and ensure that the learning materials of distance students are disbursed on time to them. According to (Tait and Mills, 2013.) DE providers need to re-strategize a fresh approach to the provision of learner support services.

(Oluniyi, 2012), noted that, Operating Open and Distance Learning (ODL) is a capital- intensive project. Funding is needed in many areas: purchasing technology such as internet facilities and computer systems, both hardware and software; remuneration to instructors and supportive staff; and equipment, building, and resource centers. The instructors are paid both for content development and actual teaching. The school fees for distance learning are higher than those for live classes because of additional costs incurred in the program development process.

Administrative skills are equally important as leadership skills in launching and maintaining a distance education program. Ideally, persons who share the vision of distance education of the individual(s) in the leadership roles provide the kind of administrative competencies needed to begin the project. Administrative competencies include; Vision of the rationale, scope and potential impact of a distance education program in their own context; A clear view of the participants and their needs; Logistical skills: the ability to foresee and plan for logistical requirements; scheduling and materials production knowledge; creative problem solving abilities, knowledge of the organization's infrastructure and of the

communications and transportation infrastructure of the region where participants live among others.

(Onyemaechi, 2013b) noted, "We note that ODL managers and administrators should be familiar with what they manage and administer, and how to evaluate every component of an ODL program to determine its effectiveness. This implies that effectiveness of ODL institutions also depend on the competence, commitment and quality of the staff. (Mansour, 2006) points out that there are three major groups of stakeholders in ODeL: the administration, faculty, and students. Each of these categories of stakeholders brings its own challenges. Consequently, scholars have categorized the challenges facing ODeL programmes into three in tandem with each category of stakeholders, namely: (i) instructional related challenges, (ii) institutional related challenges, and (iii) individual related challenges. The instructional related challenges have to do with the faculty whose major challenge is lack of familiarity with ODeL philosophies and the expected ODeL skills since most of them came from the face-to-face mode of delivery (Commonwealth of Learning, 2004). (Sekyi, 2013) cited in Welch and Reed, (2005) who assert that administrative support in Distance education aims at providing adequate facilities and learning resources to distance students. University of Birmingham code of practice for distance learning (2012- 13: 9) as cited by (Sekyi, 2013), the prospective student should have a direct access to information about the admission requirements of the program, particularly to include; access to resource, hardware and software. Students should be made aware of whether on- going access to these requirements for continued registration on the program, expectation and time commitment that would be placed on them. They should be notified of the nature of extent of independent, collaborative and supported study contained within the program, any requirement for attendance at any location at any time throughout the program and

additional costs which might be associated with the program such as travel, and subsistence, or necessary provision for personal tutor to visit the student's location.

2.7 Influence of information communication technology on distance education

Technology has become an outstanding feature of twenty-first century education in both conventional and distance education (DE) institutions and is creating a way that teaching and learning take place, Technology-based teaching strategies, such as flipped and virtual classrooms or blended learning are becoming increasingly mainstream in conventional institutions (Zajda, 2016). According to (Mulwa, 2012) , the preparedness to start using e-learning was determined by education status and presence of technology infrastructure. This agrees with Gakuu (2006), who asserts that distance education relies so much on information technology (ICT) for transmitting educational materials to the learners. It is important that both the lecturers and students should have some basic computer literacy knowledge in order to catch up with the demands of the day. However, (Brodin, 2003) supports (Nihuka, 2008) who argue that the impact of technology is creating in education sector has not been disseminated throughout the world and advocates for the need to have it known among many instructors and learners present. Ololube (2006b) observed that distance education programs in Africa have not been fully embraced. Learning institutions' system appears not to be supporting an enabling environment for technology to thrive, hence creating a technological gap between instructors with technological know-how and those without (Prensky, 2002). In a study conducted at Open university of Tanzania (Mbwete, 2009) established that lecturers did not only lack technological information and skills, but technological gadgets themselves.

The application of technology in DE evolved as one of the models of delivery of distance education and was later incorporated in all other models, changing the forms of application to incorporate mobile learning (m-learning) which has grown from a minor research interest to a set of significant projects in schools, workplaces, museums, cities and rural areas around the world. Technology plays an important role in learning and teaching because it promotes active learning (Yerushalmy and Oshrat, 2004). In the African context, technology-enabled ODL is featured prominently in regional commitments and plans. According to the 'First Ten- year implementation plan' of 'Agenda 2063' (African Union Commission, 2015) the Union is committed to investing in open, distance , and learning (ODeL) resources, and to establish an African Virtual E- University with an aim of increasing access to tertiary and continuing education in Africa by reaching a larger number of students and professionals in multiple sites simultaneously. According to (Agalo, 2008) the advent of technology and, in particular, communication technology, have helped turn the world into a global village. It has been observed that political, economic and cultural changes now do influence people worldwide almost instantly, with the advent of technology of Industrial Revolution in the mid-19th century having given birth to distance education. Agalo further submits that the teacher and the learner have been separated using technology to establish communication between them. What is being observed worldwide is that the reach of electronic media, both in terms of area and population served, has significantly expanded, and the type of student, the reliability of the technology and the availability of adequate technical support, are some of the critical components for the continued development of distance education globally. A number of countries in the Sub-Saharan Africa such as South Sudan, Burundi and Somalia, among others experienced civil wars. Many of people have been displaced and lost their schooling. Educational institutions have been destroyed, making access to education almost impossible. People from such

environment have sought for alternative ways of acceding education. Distance education has been chosen as an alternative form which does not require physical presence in an institution of learning. A number of refugees have sought asylum in the neighbouring countries considered to be safe. Kenya is one of such countries, which hosts a big population of refugees, is it taking full advantage of technology to reach these refugees with quality education? What is witnessed more often is establishment of learning centres whose quality is largely affected by the condition at the refugee camps, a poor state of facilities and a lack of trained teachers. For example, the Dadaab refugee camps in northern Kenya serving the Somalia and South Sudan, 90% of teachers are hired from the refugee community itself, only 2% of whom are qualified (UNESCO., 2014b). According to (Nisperos, 2014) in technology-driven age of human society, e-learning emerged an important tool for educational purposes. It has shaped school systems and educational institutions by providing students with new ways of interacting and learning with one another and giving teachers new ways of monitoring students' progress and expanding their learning opportunities. Any higher institution for learning that would opt out in adopting technology would be considered as at a disadvantage compared to other universities that would have chosen to adopt it.

Universities in Sudan are not an exception to part in taking into account the issue of technology to be real. However, (Odunaike, 2013) observed that is important to recognize the fact that implementing e-learning in an institutional setting and put it into the educational context of a university is complicated. It requires a robust technical infrastructure to support the delivery of the e-learning courses and at the same time bring on board all the major would be users to accept the concept e.g, faculty members and student (Alamin, 2014) .

The talking function on mobile phones is no longer the dominant function as textual and mobile data traffic growth has out spaced voice traffic growth (Haydon, 2004) in McClatchey, 2006). Information and Communication Technologies (ICT) have had a quiet beginning in education, but have become an essential component in preparing today's students for roles in the future workplace (Buabeng-Andoh, 2012). Initial excitement over the prospect of acquiring computers and other new technologies in the classroom led to significant spending in the education sector in the 1980's and 1990's. Because people spend more than 50% of their time outside their offices and classrooms (Hayes et al, 2004), m-learning can be a way of reaching them for education and training. Adoption by the private sector happens quicker than in the public sector, creating a significant delay in personnel to fill positions in the workforce. Government and Non-Government Organizations (NGOs) have invested heavily in ICT in the education sector only for adoption to lag behind the private sector and its needs of a computer literate workforce (Blaak et al., 2013); (Buabeng-Andoh, 2012) . The mobile phone has several functions that educationists can take advantage of, such as identified messaging, imaging, games, business and media which are frequently offered content services (Yerushalmy and Oshrat, 2004). Universities have opened access by availing teaching, learning and research resources through the internet, a Phenomenon referred to as open education resources (OERs) (Lane, 2012a); (Lane, 2012b.) ; (Carson et al., 2012.)and (Lane, 2011.) OERs are not a recent entry to the education sector but their increased acknowledgement and use are fairly recent especially in universities in developing countries (Richter and McPherson, 2012). OERs' vision for openness is to enable availability and accessibility of educational materials to all who need it. Therefore OER is open in the sense that it can be, as defined by (Lane, 2012a), accessed, used, manipulated, re-used and disseminated as any case may require. Another plus, is that by openly sharing materials, Africa's professional development can be enhanced

through the knowledge and trainings available through OER (UNESCO., 2014b). But such beliefs have not gone unchallenged. According to (Richter and McPherson, 2012) , the mere provision of OERs is widely overrated and may not necessarily have a great impact in reducing educational deficits in Africa. This is because, like all aid to developing countries, numerous barriers impede the achievement of noble objectives. For instance, OERs need to be contextualized to fit into the socio-cultural beliefs of the student and the teacher to the extent that even well designed and high quality materials may turn out to be unusable to the recipient.

(Igbokwe, 2015) observed that in ODE, learners are remote to the institution and are in large number, it is difficult for a learner to physically visit the institution regularly to get advice/support or services as in the case in a conventional system, it is equally difficult for the institutions to physically provide various services for the learner due to limited available human resources required to serve the unbounded student population. ICT becomes a major means of overcoming the limitations on both the part of the learner and the institution. However, the development of ICT in the 21st century has provided means of overcoming the limitation on both the learners and institution by providing medium through which distance education programs are run. According to (Onyemaechi, 2013b), there should be serious efforts to recruit and train administrators and academic staff with specific emphasis on open and distance learning; secondly, distance education institutions in sub-Saharan Africa are in serious need of record keeping, as this will go a long way in assisting researchers on the policy, practices, and administration of ODL models for the achievement educational goals; and finally, the sub-Saharan African countries need to embrace forward looking policies on new generation applications of ICT in teaching and learning. (Gakuu, 2006) argue that distance learning relies so much on ICT for delivering the educational materials to the learners. (Simiyu, 2016   ) assert that

with current trends in telecommunication, a lecturer needs to have some basic computer knowledge in order to deliver. (Power, 2011) contend that there is a significant impact of technology in DE to the extent that students must have access to computers and other relevant technology. Computer skills and practical experience is an important student characteristic for any current DE programme. (Rangara, 2015) observed that it should also be acknowledged that students entering DE programs (even those with computer skills) will have to face other technology challenges. These include: one, navigating the university's online learning management system (LMS) and website, which, is quite new and sometimes complicated. Rangara adds that this is a further indication for host universities to provide orientation programmes that include technology, time management, study skills and learning strategies. (Harrell II, 2011) advocates for an orientation program for the new students into the university to enable them get exposed to the new challenges. Distance students have wide variances in demographics and contexts which complicate identification of their needs. In other instances, the student's expectations do not correlate with course or programme objectives. According to (Subotzky and Prinsloo, 2011) and UNISA task team 4 report (UNISA, 2010) there should be profiling of students who turn up for the program. Such mechanisms seek to understand the student's needs from present and past experiences while identifying potential areas of conflict. (Rangara, 2015) observed that DE has also quickly expanded due to faster and convenient platforms of modern ICT. It can be argued that technology and DE are mutually dependent and that the growth of DE has symbiotically been dependent on the growth of communications technology. It is apparent, that in the early 20th century when print correspondence was the main medium of communication, so was the technology media for DE. Unfortunately, most often, a high percentage of these students are unable to complete their programmes because of underestimating the demands of DE. (Anderson and

McGreal, 2012.) observed the ever changing technology has put faculty, student and institution at loss as to how best interaction can be mounted and how best to keep down the cost of changing technologies. (Makoe, 2011.) argue that the socio-economic status of students and the affordability of technology and poor infrastructure in the living areas of students, contribute to the digital divide prevalent amongst students, particularly the rural students. (Heydenryck and Prinsloo, 2010.) argue that access to the internet and lack of technology skills often creates a challenge when there is limited access to electricity and telephone networks and when students do not have expertise in using computers to search online resources. (Ferreira, 2011) observe that communication is essential in human life and that "where two or more individuals share information, knowledge, values and skills, it is necessary to communicate in such a way that any misunderstanding is avoided at all costs". (Heydenryck and Prinsloo, 2010) identified a number of challenges that affect the students, amongst others are the lack of access to the online system, caused by infrastructural constraints; lack of skills on the usage of computers; low self-efficacy which could have a psychological bearing on their ability to catch up with programs most especially those from rural settings. (Letseka and Pitsoe, 2014) argue that most students from rural areas are affected by the mentioned challenges. This can be attributed to their poor socio-economic backgrounds; most rural students are first generation university students in their respective families. (Letseka, 2015) argue that Computers are also not easily accessible in their home setting. Similarly, the schools they graduated from are poorly equipped with learning resources and well qualified teachers. (Letseka and Pitsoe, 2014) observed that "Sub-Saharan Africa, though having adopted technology to open-up learning to those students who would otherwise not have had the opportunity to be in higher education, faces more challenges in terms of infrastructure and institutional, physical and human capacity to provide that learning". (Mbatha and Manana, 2012.) argued that access may be an

issue for first-generation and low-income students and those from rural areas where low-speed Internet connections prevent them from using websites adequately. Possibilities of sharing someone's computer may raise issues of privacy while those of travelling to areas where Computers are available could be financially challenging. According (Ngubane–Mokiwa and Letseka, 2015) noted that in some findings the students are found to be illiterate to use the tools and may never be able to use them for learning in future because of their habits. (Bigatel and Williams, 2015) acknowledged that students' levels of satisfaction get higher when they realize that their teachers are well-trained to teach using online platforms. Other students talked about the ineffective instructors. They noted the lack of instructor involvement in the discussions and in communicating with the students and the lack of feedback on their work.

In distance education department or institution, the ultimate way of improving instruction to students who study off campus should be by use of Information and Communication Technology (Matovu, 2012). This would help students to register, study and even to do examinations in any place in the world without necessarily coming to the universities. He (Matovu, 2012) further observed that with full integration of Information and Communication, Technology in distance education universities will be able to offer education to a bigger population.

In the study conducted by (Igbokwe, 2015): (Matovu, 2012): (Jonssen and Haag, 1995) they all agreed that integration of Information and Communication Technology into distance education would be the best way to increase enrolment to distance education programs, reduce on the challenges, and to be assured of quality and sustainability in distance education in Uganda. Across Africa, many countries have started investing considerable amount of money and designing new policies all aimed at making teachers adopt and use ICT in schools. However, there are many

challenges some of which could be attributed to the teachers' skills in using ICTs (Zaman et al., 2011).

Although ICT has had positive effects on businesses in Uganda, there are still challenges. For instance, in Uganda, internet coverage has enlarged exponentially with significant investment in mobile money, exemplified by Airtel, MTN, Africel, use of mobile phone-based money transfer services. Although there are a variety of online distance education programs in existence, the costs and support systems have been inhibitive to enrollment in those programs. Adoption and use of ICT in schools requires skilled teaching staff and visionary school leadership. Teachers and school leaders need to be knowledgeable about the potential that ICT presents during teaching and learning in schools. Where this knowledge is lacking, policies formulated by government and investments made towards implementation of ICT in schools, frequently miss opportunities to realize the desired school reforms (Higgins and Moseley, 2011). Investment and planning for training ICT teachers seems to be treated as an additional cost rather than as an essential level for changes in teaching and school reforms. (Elango, 2008): (El Gamal and Abd El Aziz, 2011) observed that most of higher education institutions in developing country contexts, however, still follow the traditional instruction approach owing to the lack of supporting ICT infrastructure, resources, and skills, mindset challenges, and the fact that adoption of e-learning has not yet penetrated the existing education institutions.

Information Communication Technologies have made it possible to deliver lessons/courses in a faster and easier manner in distance education by using computer-based or internet-based technologies (Vasudevaiah, 2016). (Hennessy, 2010) observed that most of programs aimed at teachers training in ICT, focused on basic literacy skills rather than on adoption and use of technology in teaching. According to (Andoh, 2012) programs for teachers training in many institutions

have continued to emphasize teaching about the technology other than how to use technology to teach. (Stevens and Kelly, 2012.) affirm that learner support is an important requirement not only for distance students but also for pure online students using the latest learning technologies. Therefore, planning should include learner support. Because DE is technology-driven, any change in technology has the potential to cause proportionate changes in functions of a DE system. This is a challenge to numerous and diverse policies available for DE practice which in turn have also affected the provision of learner support. (Baggaley, 2011) observes that the internet (a modern driver of DE) is posing serious challenges to the policies and practice of DE in ways that are yet to be understood. According to (Segoe, 2012.) , (Commonwealth of learning (COL), 2009.) there are two broad components of learner support. The first one is the tutorial support and the second one is the organizational and emotional support. Tutorial support includes intellectual, mentorship, tutorship and all learning activities while organizational/emotional support comprises of guidance, counseling, administrative procedures and any other non- academic student concerns.

(Otto, 2011), (Bukhsh and Chaudhary, 2015) and (Matovu, 2012) also agreed that ICTs have the capability to expand access for higher education as well as secondary education among people.

ICTs enables distances education institutions to provide knowledge within reach of all. ICTs provide the opportunity of conducting thousands of classes on hundreds of subjects and courses available anytime, at any place, as per the need and convenience of learners. ICTs offer flexibility in an organization and design of courses in a suitable and effective manner that facilities development of knowledge, skills and competences among learners. After analyzing and organizing a variety of approaches found in ICT uses in teacher training institutions, (Andoh, 2012) concluded that

these institutions were not adequately preparing their teacher trainees to effectively use technology in teaching and learning. A study by (Ananiadou and Rizza, 2010) on the use of ICT in teachers training colleges in nine OECD countries found that ICT was considered as a transversal subject cutting across all other subjects, hence nobody felt responsible for it. Some common documented individual related challenges are lack of ICT skills, inability to afford necessary ICT hardware and software, high internet costs, work-study balance among others (Dodo, 2013a) ; (Nyakudya, 2012). According to (Buabeng-Andoh, 2012) Ugandan teachers are found to have little ICT training either in general computer skills or knowledge of how to use computers pedagogically. Programs for teachers to learn these skills have been unsuccessful for a number of reasons. Among key reasons that prevent teachers from attending computer workshops or practicing skills learned include being overworked and overcommitted at the schools. Technology plays a critical role to support and mediate the interactive process (So and Bonk, 2010), through which students are able to establish social and academic support networks while becoming constructively involved in their learning activities. According to (So and Bonk, 2010) students through online collaborative learning can engage in higher-order thinking skills such as meta-cognitive knowledge, reflective inquiry and epistemic agency that facilitate examination of existing knowledge and generate new knowledge. (Garrison, 2000) argue that students are exposed to various online learning resources and conditions for quality interactions (with peers, teachers and content) in order to achieve worthwhile learning goals and profound levels of understanding. (Kamba, 2009) in his study established that students engage in peer interactions in order to achieve their academic goals. (Dutton et al., 2002) identify the need for some level of computer competence as predictor of student participation and achievement in online activities. (Colla J. MacDonaldm., 2005) assert that although it is important to establish effective communication and develop social

bonds, there is a need to create a secure environment that facilitates open communication to sustain the community. According to some studies such as (Hollow, 2012) (Kahiigi et al., 2012a) (Fahy,2005) (Shany,2000), have indicated that motivation, self-discipline and self-directed learning, are facilitators of collaborative e-learning. (So, 2008) argued that there are challenges which include the unclear expectations of teachers, additional workload, slow access and no synchronous communication. (Cantoni et al., 2004) argue that in some instances technology and online environments can be frustrating due to the lack of technology skills of students and teachers. (Kirschner, 2004) assert that collaborative e-learning is affected by lack of proper pedagogy and the application of traditional face-to-face pedagogy in online environments. (Kahiigi et al., 2009a) observe that there is limited understanding of integrating technology and pedagogy in designing collaborative e-learning. (Koponen et al., 2011) points to lack of teacher training for modern educational technology, user environment, culture and language as aspects that challenge the effective adoption and use of collaborative e-learning.

(Omotosho et al., 2015) observed that ICT is extensively used in the University for students' Admission, registration, distribution and access to course materials, continuous assessment, communication and social interactions. Consequent upon the findings of this study, it can be concluded that ICT is a major and inextricable component of distance education. To acquire these skills, teacher educators should prepare teachers properly, as (Higgins, 2011) noted, teachers who used ICT tools in classroom might have experimented or observed their own teachers use ICT tools during formative days in initial teachers training institutions.

(Omotosho et al., 2015) further observed, quality of distance learning has always been contentious. Those against distance education somehow equate quality of distance education with that of the physical face- to-face traditional education in the

classrooms. Distance education providers must strive to use quality and reliable ICT hardware and software with access available every time of the day. Just as important, these systems must be supported by highly skilled individuals, armed with the knowledge and skills they need to ensure hardware and software run smoothly. Instructors need sufficient time to gain experience with new technology use (especially in education), to share experience and to use effectively technology for instruction (Illara, 2006). A study in Philippines identified resistance to innovation, uneven innovation practice, and lack of standards for innovation as some of the challenges facing faculty in ODeL (Arinto, 2016). The technological support initiatives lessen students' technological access problems but not for all the students. Even though the students can access the facilities, they can only do so during working hours, meaning that when they are at home, they cannot do so. This could be due to the nature of resource constrained environments in which students reside that are characterized by lack of Information and Communications Technology (ICT) resources, electricity and the fact that some families live below the poverty line (Fuchs, 2008). Yusuf (2006) asserts that operational communication and technology tools are a pre-requisite to a successful distance education program. (Mayeku, 2011) observed that many institutions in International Network for Availability of Scientific publications (2003) noted that the presence of expensive internet posed a challenge for technology utilization in distance learning programs. (Yusuf, 2006) noted that the absence of electricity and erratic electricity supply in major areas in country (Nigeria) was a big threat to the utilization of technological services. (Nwagwu, 2006) noted that Africa's significant drawback has been lack of manpower with technological capabilities, and inadequate gadgets that can be used together with available internet occasioned by their high cost.

2.8 Challenges of distance education in Uganda

(Attri, 2012), noted that, using electronic medium in distance learning can inadvertently exclude students who lack computer or writing skills. These skills are required if computer technology is used. Students will typically be offered volumes of electronic-based information. Using this information will be a problem for some non-technical students. Many adult students are not well versed in the use of technology such as computer and internet. They must be taught how to manage, not only their study time, but the materials presented as well. (Owusu-Mensah et al., 2015) stress that there is need for institutions to put emphasis on staff development programs and human resource development policy for teaching, technical, administrative staff and part time staff involved in the operations of distance education. (Orom et al., 2012) observed that it is moderately clear that in developing countries, infrastructure penetration is so poor and inadequate. In most cases; these infrastructures such as electricity, telephone connectivity, internet, highway and good roads are restricted to urban areas and thereby influencing the trend of access to technology being restricted to urban areas, because a large number of the population are living in rural areas therefore no access.

(Oluniyi, 2012), (Bukhsh and Chaudhary, 2015), observed that poor internet connectivity constitutes a threat to the smooth operation of an online project. Though the universities here made a significant breakthrough in this regard, occasional erratic functionality often creates dis function for the users.

Closely related to the internet issue is the instructor incompetence in using online platforms. Many instructors are unaware of the existence of web facilities, and even fewer are efficient users. E-teaching platform such as Moodle, blackboard and tutor

are unfamiliar to a large percentage of instructors who are already deeply entrenched in the traditional face-face delivery mode (Oluniyi, 2012)**.**

(Oluniyi, 2012) noted that, the availability of technicians to provide logistical support to faculty members is another challenge. Many instructors are still in the early stages of using a computer effectively. Even after some instructors have completed their content creation exercise uploading the content to the drop box is a daunting task.

(Onyemaechi, 2013b) observed that sub-Saharan African countries have been found experimenting with the use of third and fourth generation technologies, such experiments appear to be limited to few institutions and information computer technologies with limited scope. The use of ICTs in teaching and learning in sub-Saharan Africa is seriously hampered by lack of expertise, lack of infrastructure, and a largely technologically illiterate user-group.

The "Distance" aspect of distance learning takes away much of the social interactions that would be present in traditional learning environments (Oluniyi, 2012), students of all kind want to be part of a large school community, and simply a member of a correspondence course. For many traditional students, this is the part of their social lives. Geographical isolation has been identified as one of the major problems for distance students. In addition to the practical problems of contacting academic and administrative staff, obtaining study materials and borrowing library books, distance students suffer from the disadvantage of being unable to interact with other students and are often denied the perception that they belong to a scholarly community (Attri, 2012).

(Dodo, 2013b) observed that, a number of students are finding it difficult to pay for their residential fees. All the student respondents noted the school authorities at

which centers are located have developed a tendency of increasing their boarding fees each block thus making it difficult for the students to meet their dues. (Dodo, 2013b) further argued; some lecturers go to the center without the full grasp of the work they are supposed to be doing.

This is according to 19 questionnaires (38%). This negatively affects the students' learning zeal and puts the name of the university into disrepute. Institutional related challenges mostly revolve around administrative systems that are not designed to address the unique needs of ODeL, funding constraints, development and deployment of the necessary infrastructure and human resource among others (Musingafi et al., 2015b).

(Keegan, 1986) and (Tinto, 1975) believes that the lack of feedback on performance or contact with teachers also constitute a barrier to distance students. (Keegan, 1986) argues that the link between the teachers and the students constitutes a vital link in teaching-learning transaction and that link, which is broken by distance, must be restored in one way or the other. (Dea Lerra, 2014), (Bukhsh and Chaudhary, 2015) further observed that, distance education is becoming the option of academically poor and weak candidates. students who join the distance education program face challenges like; lack of tutors and materials, lack of time and libraries at the study centers, insufficient module supply, wrong location of study centers, heavy workloads of tutors. Lack of policy and proper organization structure, and lack of information in distance education program in general need great attention to augment the level of performance of students in DL.

Despite the proliferation of online courses and programs, there are few students on what constitutes effective teaching in the online learning environment (Wang, 2000). A common mistake online course developers or instructors make is trying to emulate the traditional classroom with technology mediated interactions without the benefit

of good pedagogy. (Wilkes and Burnham, 1991) reported that good online teaching practices are fundamentally identical to good traditional teaching practices and that factors that influence good instruction may be generally universal across different environments and populations.

2.9 Previous studies

This section presents a review of previous studies that relate to this study on matters of academic, administrative and information communication technology and their impact on distance learning in Ugandan universities.

1. MUNGUTI (2016), Learning Resources and Students' Academic Performance in   Geography in Makueni County, Kenya.

The aim of the study was to investigate the relationship that exists between learning resources and students' academic performance in geography in KCSE in public schools in Makueni County.

The study adopted a descriptive survey design. In this study, the target population was from public secondary schools in Makueni County and included principals, teachers of geography and Form Three secondary school students studying the subject.

The findings of the study were;

The pre-service training given to teachers in the use of learning resources in the teaching and learning of geography does not promote academic performance of students in the subject in Makueni County.

The use of learning resources in teaching and learning geography in public schools in Makueni County is a good predictor of academic performance in the subject in

the county. On the necessity to use learning resources in teaching and learning, in most of the schools in Makueni County, it was felt that the use of learning resources was highly necessary.

The study also identified some of the challenges interfering with the adoption of learning resources in teaching and learning. The challenges cited by teachers included: the unavailability of the resources; prioritizing the sciences; few number of lessons slotted for the teaching of geography which did not allow for adequate use of learning resources in teaching; inadequate number of resources for use in teaching in the subject; a wide geography syllabus; teachers who saw the use of learning resources as a wastage of time; shortage of infrastructure like demonstration tables; lack of electricity, students not appreciating the use of learning resources in teaching as well as lack of evidence of their effectiveness from internal examinations.

This study has some resemblances with the current study; it used a descriptive design as method in data collection and the availability of teaching and learning resources in schools in improving the learning.

This study differs from the current study from the following;

The study was conducted in secondary schools in Makueni County, Kenya. The current study is dealing with Universities in Uganda conducting Distance learning. The study indicated that there is little significance in pre-in-service for teacher who taught the subject. This study advocates for teachers to be trained in Distance learning so that they make a good impact on the students.

2. **(Makisio, 2016)** conducted a study titled "FACTORS FOR TEACHERS' RETENTION DECISION IN THE TEACHING PROFESSION IN TANZANIA: A CASE OF PUBLIC SECONDARY SCHOOLS IN NYAMAGANA MUNICIPAL COUNCIL."

The overall objective of this study was to find out the factors responsible for making public secondary school teachers in Nyamagana Municipal Council (NMC) are motivated to remain in the teaching profession. This study used a case study design.

The target population of this study was 1281 secondary school teachers from 30 public secondary schools of the NMC and 14 non-teaching staff (associate officials) that made the grand total of 1295 target population in which, the sample size obtained.

The findings revealed that under teacher personal characteristics employed older teachers are more likely to stay in the career to retirement age than young teachers who most of them uses teaching career as a stepping stone to another career as matter of age concerns.

The findings revealed that experience matters as well in teacher retention decision. An individual opts to stay or leave in any career after working for some time while comparing the success or failure of his intended goals.

The findings revealed that most of less competent teachers whom are many in public schools, they are more likely to stay in teaching career in public secondary schools as they have no optional employment opportunities to look for in a sense that can't compete in the labour market.

The findings indicated that working environment such as workload, class size and adequacy of teaching and learning materials is not conducive at all to influence teachers stay in teaching profession.

The findings identified that government initiatives are not sufficient since they are applied in a very low rate especially a yearly salary increase and low speed in improving of working condition.

This study is related to the current study in a way that it used a design which combined qualitative and quantitative approaches. It also identified the issue of the teacher as an instructor. Conditions that can help a teacher to stay in the profession were identified. It also raised the working environment which part of the issues the current study is concerned with.

However, the study differs from the current one in a way that, it was conducted and concentrated on the teacher. All the issues considered by the study were to address the teacher's well being so that he can stay in the profession.

The study is useful to the current study in that, it pointed out the issues that make a teacher stay in the profession and if those responsible in Universities take them up, part of the challenge will be sorted.

3. Andambi and Kariuki (2013) conducted a study on learning resources used for teaching Social Education and Ethics (SEE) in secondary schools in Bungoma District, Kenya. The objectives of the study sought to find out the types of learning resources available, their adequacy and the effects of their use in teaching. To carry out the research, a field survey design was used. Results of the study showed that the types of learning resources available in schools included: life periodicals, recommended textbooks, newspapers, visual aids like models, pictorial materials, globes, and maps, audio-visual aids like television, audio aids like radio, and printed aids. On adequacy, the study established that learning resources in the district were adequate. Finally, on effects of resources use, more than half of the students (55%) agreed that the types of learning resources used made knowledge in SEE more

lifelike and interesting. . (Andambi and Kariuki, 2013) recommended provision of trained teachers with skills in SEE who could make use of the available resources and if possible create others in order to have the realization of SEE objectives. (Andambi and Kariuki, 2013)'s study is very relevant to the current study because of its examination of types (variety) of learning resources, their adequacy (availability) and their effectiveness.

4. **Reche et al. (2012)** conducted a study titled '' Factors contributing to poor performance in Kenya Certificate of primary Education in public day primary schools in Mwimbi Division, Maara District''. The study was based on the adequacy of learning resources like text books, library books, wall maps and exercise books in Maara District, Kenya. The study was conducted in primary schools in the area and the objectives of the study were aimed at examining the role of school factors, teacher factors, community factors and pupil factors in promoting poor performance in KCPE. The study utilized the descriptive survey design.

Findings showed that among factors contributing to poor performance in primary schools were learning resources which were inadequate. The study recommendations were: employment of more teachers to reduce teaching workloads. According to findings of the study it was established that study materials were in readily available in schools and where existed were mainly in print form. The study recommended that varieties of study materials be availed.

This study differs from the current study in that it addressed itself on the provision of teaching resources and provision of more teachers as the key variables to improve performance of the learners in the national examinations. The study did not consider other factors like the learners' support systems, ICT, and the general infrastructures of the schools as contributing factors to performance of the learners.

This study relates to the current study in a way that it recognizes the aspect of teachers to be provided in adequate numbers and also teaching resources of which the current study considered as among the variables that affect distance learning program.

5. (**Nzabihimana, 2010**) conducted a study study " titled The nature of schools and academic performance of pupils in primary schools in Gasabo District, Kigali city, Kampala International University".

The purpose the study was to establish how the nature of schools related to pupils' academic performance in primary schools in Gasabo District Rwanda. The three objectives of the study aimed at comparing the academic performance of pupils in public and private primary schools; establishing the effect of availability of school facilities on pupils' academic performance; and finally establishing the effect of teacher quality on pupils' academic performance. The study design adopted was the descriptive cross-sectional survey design. The study sample included 40 teachers and 10 head teachers. Instruments for collecting data included questionnaires and an interview guide. Further, data on PLE results for 300 pupils who participated in the study was obtained and used to compare pupils' performance.

From (Nzabihimana, 2010) study, a difference was noticed in pupils' performance in public and private schools. Also, it was established that pupils in private schools performed better than their counterparts in public schools. Finally, it was found out that among factors found to affect academic performance included school facilities and teacher quality.

This study differs from the current study in that it only considered the schools' infrastructure and quality of the teachers as the only variables that affect pupils' performance. The study did not consider the administrative role, the ICT support,

and other learners' support systems as among the factors that affect performance in schools.

The study relates to the current study in that it addressed the issue of quality of teachers and infrastructures of the schools as key influencers of the academic performance. It also pointed out the provision of adequate resources to schools as important in improving quality and performance.

6. (**Kurdziolek, 2011)** conducted a study on classroom resources and their impact on learning. The study was conducted in the state of Texas, USA and examined the use of computational technologies such as SimCalc in the teaching/learning process. The study had three objectives which were: to find out how different classrooms instantiate SimCalc in terms of enacted resources; to establish the consequences the use of computational technologies has for student access to learning resources; and finally to determine the possible effects on student learning and other outcomes.

The study was designed as a case study with observation as the method of data collection. The results of the study indicated that some other classroom factors, like the overall classroom culture and the degree of interaction between students and technological resources were significant in affecting the students. (Kurdziolek, 2011) made two recommendations. The first one was the need to identify the investments to make including training of teacher training and resource funding in order to help promote positive classroom environments in terms of resource use and socio-physical resource richness. The second one was the need to find out the effects of socio-physical resource-rich classrooms and the use of the resource among teachers and students on outcomes like students' preparation for being future knowledge workers.

This study differs from the current study in that it only considered the ICT usage and the classroom environment as the variables that affected students' learning. Other variables like welfare of the learners, advisory services and administrative services were not taken care of by the study.

The study relates to the current study in a way that it advocated for staff training and providing of funding for resources in order to boost the classroom environment. This is part of what the current study considered as some of the variables.

7. (**Yara and Otieno, 2010**) conducted a study on learning resources and their influence on academic performance in mathematics in secondary schools in Bondo District, Kenya. The study sought to answer three questions related to the effects of teaching/learning resources and academic performance in mathematics, effects of teaching/learning resources and academic performance in mathematics, and finally, the teaching/learning resources that would predict academic performance in mathematics. The study design adopted was the descriptive survey. The main finding of the study was that students' academic performance in mathematics was positively influenced by financial support from parents/guardians, financial support from the government, inadequacy of trained teachers, classroom/laboratories, stationeries/teaching aids, textbooks, students' attitude and personal extra time.

(Yara and Otieno, 2010) in the study recommended that in order to improve performance in mathematics, the government and all education stakeholders should seriously address the following factors: a review of the curriculum, providing in-service training for trained teachers, employing more competent teachers, motivating learners, improving government support to education, applying good teaching methods, improved students-book ratio and ensuring improved pay to teachers. This is in line with the current study which aimed at establishing whether

learning materials are produced and delivered to students on distance learning in Ugandan universities.

8. (**Leontyeva, 2018)** conducted a study titled " Modern Distance Learning Technologies in Higher Education: Introduction problems".

The purpose of the study was a study at Kazan Federal University with a purpose to assess the quality of the e-learning system implementation and to identify students' attitudes toward distance learning. The research was conducted at Kazan Federal University to define barriers to efficient implementation of distance learning technologies and to introduce a new model, which will have a positive effect on the e-learning development in high school. The findings of the study revealed that 90% of the respondents answered positively, with the view that they can learn the subject at any time (within the limits for learning the unit). It should be noted that distance learning requires the students to be highly independent, but the results showed that not all students were ready to work independently. Almost all the students (95.6%) have positively assessed the effectiveness of using distance e-courses.

They noted that the advantage of such training is that there is a wide opportunity to learn the material and perform assignments in any place and at any free time. Students noted a wide variety of assessment materials worked out in the electronic courses: tests and problems, creative assignments or case studies, group projects on-line, essays, interactive lectures, hyperlinks, group chat, forum. In addition, students noted that the electronic course is enriched with a large amount of reference information in the form of links to specific sites, electronic textbooks, video materials, etc. This aspect is very important for learning the course. The results revealed that the main shortcomings of distance learning are the lack of full-fledged

communication with teachers and fellow students (about 44% – 541 students), the lack of skills required for handling the computer-based online learning systems (57.9% – 712 respondents) and the critical attitude of parents to such type of activity (39.7% – 488 respondents).

On the positive aspects, almost all the participants pointed out to an opportunity to expand their own space (89.7% – 1103) and save their free time (80.9% – 995 students). The analysis of the responses also revealed that the most common concerns regarding the distance education are the concerns about the inability to interact with the faculty and teachers (55.3% – 680 students) and inability to seek help if it is needed (35.8% – 440 students). Further, respondents indicated the lack of sufficient academic advisors online (25.8% – 292 students). Less than one percent of respondents (3 persons) indicated that their academic group size is not appropriate for online learning.

The results of the study imply that, currently, distance learning potential has not been fully realized to increase the competitiveness of universities. Many teachers still hold on the traditional teaching mode, because they are convinced that it takes quite a lot of time to prepare this course. It should be pointed out that lack of material compensation reduces the interest of teachers in using the problem-developing tasks. This, in effect, reduces the effectiveness of distance learning. The majority of teachers (78.06%) called for the combination of distance with full-time modes. Therefore, the first internal problem that needs to be solved is an incorrect assessment of the university's potential. As the strategic goals are set, university administration has to assess the opportunities, namely – to see how all types of distance learning contribute to the goal achievement.

The study recommends that for effective realization of distance learning, all aspects affecting the program should be addressed right from the planning stage. Issues of

concern identified included; costs, financial and non-financial benefits, and the payback factor. All the elements of technological infrastructure, including the administrative support and the elements of production cycle and learning material presentation, must correspond to the state standards. The study notices that infrastructure is of strategic importance, as teaching materials are being converted into high-quality distance learning data. The findings of the study are in line with the studies conducted in Iran and Taiwan (Cheng, 2012); (Mohammadi, 2015). Distance education develops through the targets set to improve the power, speed, and accessibility of instructional technologies (Conde et al., 2014) ; (Shannon and Rice, 2017). Unfortunately, computer literacy remains quite low among students for full-fledged systems application (Hatlevik et al., 2018); (Hoffman and Vance, 2005).

This study differs from the current study in that it considered quality of e-learning systems and learners' attitudes as the only factors that can affect distance learning. The role of instructors, administrative roles and other support systems were not considered by the study.

However, the study relates to the current study in a way that it provided for learners' support systems in order to for distance learning to be effective. The study further pointed out the issues of internet, lack of proper communication with instructors, lack of sufficient academic advisors as some of the threats to DL programs. The study also pointed out the issues of planning, provision of ICT infrastructures, teaching materials as key in promoting DL. All the mentioned are in line with the current study as some of challenges that DL is facing.

 9. A study conducted by (**Kanyoi, 2019)** titled " Factors influencing the integration of information communication technology in teaching and learning in secondary schools: A case of Mutungulu sub county, Machakos county".

The aim of the study was to determine the influence of infrastructure availability and accessibility; teachers' ICT competences; teachers' attitude; and teaching experience on integration of ICT in education in secondary schools. The research design for the study was descriptive survey design. The findings of the study revealed that there was a large number of teachers (staff) who did not have prior training in ICT and could not help in the integration of ICT, and inadequate ICT infrastructure. The ratio of learners to computers 1: 11 implying that the number of computers was inadequate. On teachers' ICT competence, the study revealed that majority (58.3%) of the respondents were able to use word processing and spreadsheet in preparation for the lesson, 33.3% disagreed, 8.3% strongly disagreed that ICT tools are difficult to use. The study further established that majority of teachers had the teaching experience between 10-24 years. The survey noted that East African nations suffer from lack of adequate technological infrastructure. These include; software, hardware, restricted internet, low bandwidth and sporadic electricity, low teacher involvement in curriculum development and assessment, absence of in-service and pre-service teacher training, poor welfare for teachers and lack of motivation. The study also established that the speed of internet has been accelerated, the costs have remained high. The study notices that 58% of Kenyans lack internet connectivity due to lack of computers. 28% who own computers expressed the high cost of internet subscription as a bottleneck. The studies further revealed that majority of teachers perceive that adoption of ICT will push them out of employment due to its efficiency. The study was to investigate how availability and accessibility of ICT facilities influences merging of ICT in public secondary schools teaching and learning.

The study differs from the current study in a way that it considered only the ICT adoption as the key factor in improving learning and teaching in schools. The study

did not consider the role of administration it plays in supporting the program; also learners' support systems were not taken care of by the study.

The study relates to the current study in that it addressed some of the variables that the current study is interested in, for instance, ICT provision, internet, lack of access to computers, training of staff and the high cost of internet as some aspects that threaten the program of DL.

10. (**Kieti J M et al., 2017**) conducted a study titled "Influence of Administrative practices on students' Academic performance in public schools in Matungulu sub-county, Kenya.

This study sought to establish the influence of administrative practices on students' academic performance in secondary schools in Matungulu sub-county, Kenya.

The study adopted a descriptive survey research design.

The population of the study comprised of 230 students and 40 teachers in 10 public secondary schools in Matungulu sub-county.

The findings of the study revealed that the influence of administrative practices on academic performance was strongly positive and significant.

The findings also revealed that the administrative practices and academic performance are statistically dependent.

The study further revealed that if a principal is highly engaged in the supervision of teachers, checking professional records, coordinating school activities, then academic performance is likely to improve.

This study differs from the current study in that it addressed only the administrative part in the course of learning. The study was conducted in secondary schools.

The study has relevancy to the current study in that administrative practices are among the aspects that are under consideration. The role of supervision is very important in distance learning as revealed by the findings of the study.

11. **(Ashiono, 2018)** conducted a study titled "Determinants Information and Communication Technology integration in learning of Numeracy concepts in lower primary schools in Mombasa County, Kenya".

The purpose of the study was to explore teachers' use of ICT tools in teaching numeracy concepts in lower primary schools. The study also aimed to further establish factors that encourage or hinder teachers' use of ICT resources in their teaching mathematics. The study adopted mixed research methodology using both quantitative and qualitative techniques to examine the teachers' use of ICT in teaching numeracy concepts.

Data was collected from both private and public lower primary schools, 88 publics and 348 private primary schools.

Three instruments were used to collect data, Questionnaire (TQ), observation protocol (OP) and teachers' interviews (TIP).

The findings of study established that 17% of teachers used ICT in teaching numeracy concepts and that only 4% of the teachers used it on a regular basis. It was concluded that teachers' use of ICT in lower primary schools in Mombasa County was inadequate.

The findings revealed that majority of the schools were not adequately equipped with ICT resources for teaching- learning purposes.

The study also found that most of the schools had only one computer laboratory which was supposed to be shared by all.

The findings further revealed that teachers' professional development on use of ICT in teaching was not adequate. Majority of teachers lacked the skills in ICT enabling them to integrate ICT in their teaching of numeracy concepts.

The study established that the teachers lacked the specialized knowledge referred to as technological, pedagogical and concept knowledge (TPACK) in order to utilize ICT tools to teach mathematics effectively.

This study differs from the current study in that, its area of interest was only on ICT use in teaching and learning only mathematics.

The study did not consider the learning support services, the administrative role, the welfare and school environment in general.

The study relates to current study in a way that it used a mixed research methodology in its efforts to address the objectives of the study. This approach is similar to the current study.

This study revealed that teachers' knowledge and skills in ICT were found to be inadequate. This is in agreement with the current study as it established similar happenings in distance learning institutions.

The study also established that schools had inadequate ICT resources which are one of the findings of the current study that many distance learning institutions lack ICT resources.

This study further revealed that there was need for professional staff development in ICT in to equip the teachers with skills in ICT. This is in line with the current study in that it recommends for continuous training of staff.

12.(**Demirci, 2009**) conducted a study entitled" How do Teachers approach New Technologies: Geography Teachers' Attitudes towards Geographic Information Systems (GIS).

The study aimed at understanding the extent to which GIS technology has been diffused throughout secondary school Geography lesson in Turkey by focusing on geography teachers' attitudes towards GIS.

A survey form was used to collect data for the study.

72

The study findings revealed that majority of the teachers (84%) had not used GIS software before.

The findings indicated that a good number of the teachers did not know how to incorporate their GIS skills into geography lessons although they knew the GIS software.

The findings further revealed majority of the teachers (80%) had not under taken any previous GIS education.

It was also revealed that majority of the teachers (87%) showed interest for in-service GIS training organized by the ministry of education if offered.

The study revealed that physical conditions in the secondary schools and classrooms are not adequate in terms of hardware and software to incorporate GIS into geography lessons.

The study also established that the number of classrooms which include a computer, an LCD projector, and internet connectivity was found insufficient.

The study revealed that despite impediments such as absence of software and hardware was witnessed, teachers' positive attitudes in embracing GIS was an essential determinant to the successful incorporation of GIS into geography sessions. The study differs from the current study in that it addressed only an aspect of ICT. The study relates to the current study in that it advocates for some component of ICT adoption in the teaching and learning. It also points out the issue of staff training and the provision of ICT resources.

13. **(Mhiliwa, 2015)** conducted a study entitled "The effects of school location on learner's academic performance: A case of community secondary schools in Makambako Town council, Njombe.

The study aimed at exploring the relationship between school location and learner's performance in community secondary schools in Makambako Town council.

The study used a descriptive cross-sectional survey design. Twelve schools took part in the study.

Findings of the study revealed that long walking affected students' performance compared to those who stay within the school environment.

The findings established that when selecting students for admission those concerned do not consider the location of the students.

The study further established that there was need to establish accommodation facilities for students who are far away from the schools.

This study differs from the current study in a way that it considered only the variables of school location and performance.

It is relevant to the current study in a way that it advocates for students support in order to improve on performance. The welfare of the learner is considered by both studies.

14. According to the study conducted by (**Bhalalusesa et al., 2013)** titled " Challenges of using e-learning management systems faced by the academic staff in Distance based institutions from developing countries: A case study of Open University of Tanzania" found that 8% of instructors had used LSM to communicate with the students, and 28.9% used the system to upload learning resources. It seems that the level of training provided by many institutions to their instructors in Sub Saharan Africa is relatively low. As a result instructors tend to lack the practical experience to use such systems effectively (Unwin et al., 2010). They further asserted that for students to achieve maximum benefits from using LSM, institutions should provide effective and appropriate training, and at the same time provide opportunity to the instructors to regularly practise using such systems.

In another similar study, 50% of the respondents cited lack of training as the main reason for low usage of LMS (Bhalalusesa et al., 2013). Despite the provisions of such motivations to instructors, it seems however that there is lack of support services which has hindered them from continuously using LMS to facilitate teaching and learning.

This study differs from the current study in that it addressed only the training of instructors in the use of LSM. The study did not consider the support systems of the learners. The role of administrators in the program was not attended to by the study. Also the other related support systems like internet, electricity and peer support are not taken care of by the study.

This study relates to the current study in that it pointed out the aspect of training instructors who would support learning to be effective. It also advocated for the provision o ICT resources. All the above aspects are in line with the current study as part of the issues the study has taken care of.

15. (**Kieti, 2017**) conducted a study titled "An investigation into factors influencing students' Academic performance in public secondary schools in Matungulu sub-county, Machakos County".

The purpose of the study was to investigate factors influencing the students' academic performance in public secondary schools in Matungulu sub-county, Machakos County.

The study adopted a descriptive survey design, questionnaires were used as tools for data collection.

The study findings revealed that the academic performance and socio-economic background of the learners are statistically dependent.

The findings revealed that the supply and provisioning of learning resources in the study area were found to be inadequate; this is likely to affect the academic performance negatively.

The findings further established that there was a strong positive relationship between administrative practices and academic performance.

The study established that the teacher satisfaction influenced academic performance to a greater extent.

The findings also revealed that teacher's absenteeism had influence on academic performance.

This study differs from the current study in that it considered a few aspects that is the student and the teacher. The study was conducted in Kenya where the environment may have been different.

The study relates to the current study in that, it used similar research design. The aspects it considered also are of concern to distance learning. The findings give a wakeup call to the administrators in distance learning especially on the staff.

16. **(Munguatosha et al., 2011)** conducted a study titled "A social networked learning adoption model for higher education institutions in developing countries."

The study aimed at establishing a model for adopting social networked learning in higher institutions of learning in developing countries of Africa.

The study adopted a mixed method of research methodology involving survey and interviews were adopted in the collection of data for building the model.

The findings of the study revealed that adoption of social networked learning in developing countries of Africa requires self efficacy, reliable technical and administrative support, infrastructure, system interactivity, adequate budgeting and accountability, and a flexible organizational culture.

The study established that the model provides a framework for integrating social software tools with the traditional learning systems of developing countries of Africa. This has a positive outcome of providing social constructivist information and communication technology (ICT) supported learning at low or no cost.

The study further established that the model has the potential to encourage formation of communities of practice to encourage development of social learning and a student-centered pedagogy.

The study revealed that the success of adoption mainly depends so much on proper budgeting, accountability and organizational culture.

Time and other resources need to be devoted to developing social networked learning and the model takes this into account.

This study differs from the current study in that it is concerned with ICT. The study relates to the current study in a way that it advocates for development of social networks. It also emphasized the issues of funding and accountability.

17. **(Kambira Isack, 2016)** conducted a study titled; Factors Affecting E-Learning adaptation in Tanzania Higher learning institutions: A case of UDS & OUT E-Learning Implementation.   The aim of the study was;

 i.   To examine critical barriers of E-learning acceptance with focus on organizational culture or perception on E-learning

 ii.   To examine critical barriers of E-learning adaptation with reference to E-learning infrastructure

iii.   To look at critical barriers of E-learning acceptance with focus on quality content creation of E-learning content

The study used a population of 80 academic staffs and technical support staffs from UDSM and OUT were randomly selected to form a sample of this research.

The study adopted a descriptive survey for data collection. The study findings revealed the following;

Majority of the respondents 51% said that Management recognition and reward on my E-learning initiatives motivates them to use E-learning and also lecturers are getting regular training on use of E-learning.

The survey also revealed that conducting of online examination HLIs is low. Some of the respondents involved in the survey had a limited understanding on E-learning. The findings further indicated that there was not enough awareness among the staff members and the general public on the use of E-learning for teaching and learning.

The study also found out that institutions were engaging in e-learning without developed and institutionalized policy for the program.

The findings established that there were limitations in the following; budget constraints to support internet, power supply, enough computers in labs and access to the computers all the time by the students.

This study differs from the current study in a way that its concerns were mainly on support systems of e-learning and the issues of instructors and the wellbeing of the learners is not clearly tackled.

The study is relevant to the current study in that it identified some aspects which are of great importance in addressing the distance learning challenges in Ugandan Universities such as high cost of bandwidth, electricity and others to support ICT in the teaching and learning for distance learners.

18.(**Christina and Mtebe, 2016)** conducted a study titled "Instructor support services: An inevitable critical success factor in blended learning in higher education in Tanzania."

This study aimed to investigate the effectiveness of instructors' support services in blended learning courses at UDSM and OUT offered via Moodle LSM.

The study is based on mixed research design using questionnaire and semi-constructed interviews as data collection instruments.

The information indicates that 10 instructors were from UDSM and 55 instructors were from OUT making a total of 65 respondents.

One of the findings emerged from this study was that instructors from OUT did not have enough skills to use Moodle features more effectively. Nearly two-thirds (more than 70%) indicated that they had not received enough training on how to use the system.

The study revealed that the majority of instructors from UDSM were competent in using the LMS. 70% of the instructors from UDMS indicated that they had received technical training on how to use the LSM.

Contrary to expectations, this study found that the majority of instructors (70%) at UDSM indicated that they do not use digital resources from the library to enhance their courses compared to those at OUT.

The study also found that the majority of instructors from UDSM did not have first-hand experience as distance learners before becoming instructors compared with those from OUT,

Another interesting finding emerged from the study was that the majority of instructors from OUT rated large number of students, and shorter time during face-to-face delivery, as the major challenge that affected them to teach blended learning courses.

The result of this study provides further evidence that there is a big difference in terms of the ICT infrastructure development between UDSM and other institutions in Tanzania. In this study, for instance, instructors from UDSM indicated that limited

ICT facilities and Internet connectivity was not a barrier to use of LSM whereas those from OUT rated them barriers.

The results of the study further provided evidence that these institutions have inadequate skilled staff to support instructors on both technical and pedagogical issues.

The study differs from the current one in that it concentrated on the issue of training of instructors in use of LSM in the teaching of distance learners. The other support systems are not considered by the study.

The study is important to the current study in that it emphasized the training of instructors which is part of the items the current study considered in order to improve the delivery of distance learning in Ugandan Universities.

19. (**Musingafi et al., 2015b**) conducted a study entitled, "Challenges for Open and Distance learning (ODL) Students: Experiences from Students of the Zimbabwe Open University.

The purpose of this study was to investigate the challenges facing Open and Distance Learning students at the Zimbabwe Open University (ZOU).
The study was conducted at ZOU Masvingo Regional Campus. The study adopted both qualitative and quantitative approaches for purposes of data collection.
The population of this study consisted of undergraduate and post-graduate students enrolled in various degree programmes offered by ZOU and ZOU staff at Masvingo Regional Campus.
The study findings revealed the following challenges;
Individual related challenges were found to be lack of sufficient time for study; problems related to the access and use of ICT; financial constraints; lack of support

from employers; and occasional obstacles resulting from travelling distance from home to regional centre; especially during face- to-face and examination sessions.

Instructional related challenges were established as ineffective and delayed feedback of students 'assignments and examinations results, lost scripts and unrecorded grades.

Institutional related challenges were found as delayed or lack of study materials; lack of students support services in areas of guidance and counseling; and inadequate academic support and administrative services at the regional centre (80%); and lack or delayed dissemination of important information (70%).

This study is in line with the current study in that it adopted similar data collection of a mixed nature. The findings of the study relate to the current study in which challenges faced in distance learning are somehow similar in the different environments in which the studies were conducted. The study further acts as an eye opener to stakeholder at national and institutional level to make plans for improvement for both distance learning and conventional learning.

The study however, differs from the current study in a way that more emphasis was put to the learner and other components like the skills of instructors, ICT and administration at policy level were given less attention.

20. **(Tandi Lwoga, 2014**) Conducted a study titled "Integrating Web 2.0 into an academic library in Tanzania".

The aim of the study was to demonstrate work undertaken by Muhimbili University of Health and Allied Sciences (MUHAS) library in an effort to integrate Web 2.0 technologies in its functions to enhance the quality of its services in Tanzania.

The study adopted an exploratory questionnaire survey to access user requirements among undergraduate medical students at MUHAS.

The study findings revealed that Web 2.0 technologies can be implemented effectively according to university goals, user needs, deployment of user friendly tools, and capacity building among library users.

The study also established that students were in support for the adoption of library 2.0 services at MUHAS.

The study further revealed that challenges related to infrastructure, inadequate staff and ownership of Web 2.0 services were identified.

This study differs from the current study in a way that it concentrated on Library as support system for learning. At the same time it was concerned with ICT related materials.

The study relates to the current study in that library is one the components that support distance learning. It is adding more knowledge especially with digital library that can enable the distance students access enough and recent published works.

Many academic libraries in Africa have not yet adopted Web 2.0 technologies to improve their services. This is a good idea to help other libraries to plan and integrate such technologies in their services.

21. (**Eduafo, 2014**) conducted a study titled "EFFECTS OF PROBLEM-SOLVING APPROACH ON MATHEMATICS ACHIEVEMENT OF DIPLOMA IN BASIC EDUCATION DISTANCE LEARNERS AT UNIVERSITY OF CAPE COAST, GHANA."

This study sought to determine the effects of a problem-solving approach intervention on the mathematics achievement of DBE UCC distance learners (DLs)

in Ghana. The study employed a mixed research design, using a sample of 506 DBE UCC first year DLs and eight facilitators.

A quasi-experimental design (a quantitative procedure) was used in the study. A quasi-experimental design involves a non-random assignment of participants to two groups, experimental (treatment) and control groups.

The target population for this study was UCC-CCE-DBE learners. The accessible population was all DBE first-year learners.

The findings indicated that a problem-solving approach affected learners" knowledge and application levels of cognitive learning domains, whereas comprehension and analysis were not affected.

The findings of the study suggest that since a problem-solving approach intervention positively affected the first year pre-service DBE distance learners in Ghana's UCC-CCE mathematical achievement in knowledge and application of Bloom's taxonomy of cognitive learning domains.

The study has uncovered that the pre-service prospective elementary mathematics teachers of UCC-CCE held instrumentalist views rather than a problem-solving view about the teaching and learning of mathematics. However, after being taught using the intervention, their views became more oriented towards a problem-solving view than instrumentalist view.

Finally, the challenges encountered in the implementation of a problem solving approach were more perceptual (time wasting, large class size, other teachers not embracing the approach) than structural (module lacks problem solving activities).

The study therefore concludes that a problem-solving approach has the potential of challenging and redefining distance learners.

This study differs from the current study in a way it was conducted purely to handle one particular subject. It considered only the learner and the instructor; other aspects that enhance teaching and learning were not part of this study.

The study relates to the current study in a way that pedagogy was a key issue that it addressed. The message it brought goes beyond to cover other subjects. In-service training for the staff in the methods of teaching is very important as was indicated in the study findings.

22. **(Nurul et al., 2018)** conducted a study titled" Students' Perceptions of the Use of Asynchronous Discussion Forums, Quizzes, and Uploaded Resources".

This research was intended to explore student perceptions of the use of asynchronous discussion forums, quizzes, and uploaded resources.

Purposive sampling was used to choose the research participants for this study.

The participants consisted of 60 diploma students from Polytechnic Sultan Ibrahim who are enrolled in a Mathematics course. A total of 60 respondents were selected as a sample consisting of lecturers in the engineering department. The population of the study was from Polytechnic Sultan Ibrahim.

The findings show that the practice of LMS for engineering students at Polytechnic Sultan Ibrahim is at a high level in the learning process. It is a positive sign that students have practiced the CIDOS LMS during the teaching and learning process.

Further the findings showed that the asynchronous discussion forum constructs have the highest mean value compared to others.

The findings further support the idea in which meaningful use of the platform and peer-to-peer learning could be promoted by introducing collaborative learning activities utilizing the discussion forums.

It was found that active students performed better in the quizzes and examinations compared to the less active students.

With the emphasis on the benefits of the LMS, educators can make a variety of quizzes online that can attract students.

The LMS could possibly contribute to the increment of the institutional reputation, enhance the nature of teaching, and give adaptability in students' life-long learning.

This study is differing from the current study in that is only considering the ICT component in delivering materials and interaction. The technology advocated by this study is what many universities in Uganda are still struggling to secure.

On the positive side, the study findings are in line with the current study because ICT utilization in distance learning is one of the concerns of this study. Student interaction is emphasized through discussions. This is good for all students for all modes of study.

23. **(Tarus and Gichoya, 2015)** conducted a study titled "E-Learning in Kenyan Universities: Preconditions for Successful Implementation".

The aim of the study was to investigate the most important preconditions necessary for successful implementation of E-learning in Kenyan Universities based on user perceptions and experiences in using existing E-learning platforms in their institutions.

This study employed a descriptive survey research design.

Data was collected through questionnaires and in-depth interviews from 525 respondents comprising of university management, e-learning support staff, lecturers and students who are currently using e-learning in blended mode approach in three leading Kenyan universities.

The findings revealed that majority of the students and lecturers have used their university e-learning portal for teaching/learning.

All the key informants interviewed also agreed that computer and other e-learning access devices; network connectivity and Internet bandwidth; and reliable learning management systems are important technological components necessary for successful implementation of e-learning.

The results clearly reveal that majority of the respondents rated relevant and operational e-learning policies; financial allocation for e-learning activities; sensitization and training of stakeholders on e-learning ;and top management support for e-learning implementation as among the most important organizational components necessary for successful implementation of e-learning.

From the findings of the study it is evident that majority of the respondents believe that learner support and motivation by e-learning instructors; learner and teacher skills on e-learning pedagogy; and adequate and quality e-learning content are the three important pedagogical components necessary for successful implementation of e-learning.

The study established that successful implementation of e-learning in Kenyan universities or any other institutions of higher learning can be accelerated if these three components are prioritized during implementation.

This study differs from the current study in a way that the study was conducted in Kenya which may have different environment. The study further considered technological aspects and its implementation.

However, the study relates with the current study in that the findings have a direct link to all learners. Technology is one aspect identified to quickly help in solving some the challenges distance learners face.

In general, this study concludes that successful implementation of e-learning in Kenyan universities and any other similar institutions of higher learning requires the blending of the three main components which are preconditions for successful implementation of e-learning categorized in this paper as technological, organizational and pedagogical components.

While this study took place within Kenyan universities, it does raise preconditions for successful implementation of e-learning that applies to any other similar institutions of higher learning.

24. (**Aguti and Fraser, 2006**) conducted a study titled "Integration of Information communication Technologies (ICTs) in Distance Education Bachelor of education program, Makerere university, Kampala, Uganda,"

The study aimed at establishing what technologies the stakeholders of this programme had access to, what technologies they believed could be used for the programme and for what purpose, and finally what prerequisites should be put in place for this technology to work.

The study adopted quantitative approach was selected focusing on the development of structured questionnaires to be used as instruments for the gathering information from students participating in the B.Ed. and Bachelor of Science

(External)programmes, prospective students of the B.Ed. (External) programme and information from tutors, managers and administrators of the B.Ed. (External)programme.

A population of 321 respondents participated in this study and they were drawn from different districts namely Soroti, Tororo, Masindi, Mbarara, Kampala, Entebbe, Wakiso, and Mpigi.

The findings of the study revealed that access to all ICTs is still a huge problem in Uganda.
The study established that majority of students do not have access to video, computer and Internet whereas a higher proportion has access to radios and audiocassettes.

Access to technology should be accompanied by knowledge and skills for its use.
The study established that there was a need to train all the stakeholders in use of the technologies.

The findings revealed that centres were not sufficiently equipped.
The findings revealed that access to ICTs was identified as one of the core prerequisites that must be put in place before the technology is chosen and used.

The findings established that funding for acquiring and maintenance of the equipments for ICT should be available.
The study findings established that electricity or alternative source of power should be in place if ICT is to be introduced.

However, in Uganda access to electricity is still very poor - with 89.7% of its energy use being derived from traditional sources of fuel like firewood.

This is much more urgent in the rural areas where access to electricity is even more limited.

The results of this study indicate that any ICTs can be used for teaching/learning but the choice of which ICT to use, should be dependent on how accessible and versatile the technology is and on what learning outcomes are expected from the teaching/learning experience. The technology should not be used simply because it is available.

The results reveal that funding of ICTs remains a challenge those Ugandan universities should plan carefully in order to deal with it.

This study differs from the current study in a way that it considered the aspect of ICT implementation in distance program.

The study relates with the current study in that its findings cut across even for the traditional programs. Planning and financing are very critical for any program to succeed.

25. (**Mtebe, 2014**) conducted a study titled "Acceptance and Use of e-Learning Solutions in Higher Education in East Africa".

The aim of this study was to investigate factors that influence acceptance and use of various eLearning solutions in higher education in East Africa.

The research utilized both quantitative and qualitative methods to gather data from students and instructors at each institution.

The results of the two case studies reveal that all four factors examined –performance expectancy, effort expectancy, social influence, and facilitation conditions – had a statistically significant effect on students' acceptance of using mobile learning,

while only effort expectancy had a statistically significant effect on instructors' acceptance of using OER.

A follow-up study revealed that lack of access to computers and the Internet, low Internet bandwidth, absence of policies, and lack of skills in creation and/or use of OER were the main barriers to OER use.

. The results showed that institutions could save more than $40,000 in three years by hosting eLearning services in the cloud.

The results described in the thesis should enable institutions to find strategies that promote greater use and acceptance of eLearning solutions in higher education in East Africa. They also give developers tools to develop eLearning services that are relevant and acceptable to intended users.

The most interesting finding was that performance expectancy was found

to be the strongest predictor of mobile learning's acceptance. This implies

that students in higher education in East Africa believe mobile learning is useful and believe it will enable them to accomplish their learning activities faster and more efficiently. Students also think that mobile learning will help them to improve their learning performance and to obtain better grades. To strengthen this belief, educators should pay attention to the quality of the learning resources deployed for mobile devices: these learning resources should be able to facilitate student learning.

The results of this study also suggest that students believe intensive training is not necessary for enabling them to use mobile learning, since they believe the mobile learning applications will be clear, understandable, and easy to use.

Finally, the results also indicate that students believe they possess the resources and knowledge necessary for using mobile learning applications.

This study differs from the current study in that it addressed itself on students' acceptance of e-learning. The study considered only the factors that affects

acceptance of use of ICT infrastructure in East African higher education. The study did not pay attention to the administrative role and other factors that may affect the acceptance of ICT infrastructures. Further, the study only considered the students without taking care of the other support systems that support learning and teaching. The study in line with the current study in that it pointed out the importance o ICT infrastructure in making learning effective. It also noted that there was lack of policies to guide ICT implementation, lack of bandwidth, internet, and computers as some of the barriers to ICT implementation in East African higher education. All these are part of hat the current study is concerned with. Further the study noticed the importance of learning resources to support learning.

26. **(Hoque et al., 2012)** conducted a study titled "ICT Utilization among School Teachers and Principals in Malaysia"

The aim of the study was to understand the use of Information and Communication Technology (ICT) among teachers and principals in Malaysia.

The study adopted a quantitative approach as a research design. The questionnaires were filled by 260 principals, teachers and teachers-supervisors who are from different schools of different states of Malaysia.

Findings show that the use of ICT in Malaysian schools is not much for school management purposes; rather it is used for daily administrative functions of the school.

Furthermore, ICT is not used appropriately and effectively in schools and as Ministry of Education do not have a policy for ICT, it is not being facilitated or supported in schools appropriately.

The finding also established that even where the staffs have basic skills of using ICT, knowledge and technical skills in ICT and educational management is lacking in schools as a whole.

The study revealed that schools do not have efficiency and capacity for using ICT in educational management.

Also, the results of this study indicate that the use of ICT can be used in school management by building physical structure and equipping schools with ICT facilities and by providing training for human resource for the system.

This study differs from the current study in that its concern was about ICT utilization among teachers and administrators. The study did not consider the learner.

The study relates with the current study in that it discussed the issues of ICT and established that institutions should open up to ensure that the staffs take part in the use of ICT.

27. **(Mtebe and Christina, 2018**) conducted a study entitled "Key factors in learners' satisfaction with the e-learning system at the University of Dar es Salaam, Tanzania.

This study aimed to identify key factors that have an influence on learners' satisfaction with the e-learning system at the University of Dar es Salaam, Tanzania.

The study used quantitative research method to elicit perceptions of learners' satisfaction with the system.

The main finding from this study is that service quality was found to be the strongest predictor of learners' satisfaction with the e-learning system, contributing 37.8% of variances.

The finding suggests that provision of support services to learners can potentially increase learners' satisfaction with e-learning systems.

The study also found that system quality has a positive effect on learners' satisfaction with e-learning systems, contributing 22% of variances.

Moreover, instructor quality was found to have a positive effect on learners' satisfaction with e-learning systems, contributing 16.4% of variances.

The finding suggests that instructors play a significant role in the use of e-learning systems. They are content experts and facilitators of course delivery, and manage students' learning.

Finally, the study also found that content quality did not have a significant effect on learners' satisfaction with the e-learning system at UDSM.

The need to find strategies that will increase e-learning system success becomes critical. Existing research tends to focus on infrastructural challenges such as shortage of computers and poor Internet connectivity.

Instructors should be trained in pedagogical skills so that they can provide reliable, timely, and effective support services to learners who use e-learning systems. Institutions should find mechanisms to incorporate pedagogical training as part of continuing professional development programs.

Institutions should establish an IT service desk with qualified staff dedicated to provide infrastructure and technical support to learners.

Institutions should conduct usability testing to uncover problems that might hinder users from using the system. Many customized open source e-learning systems were not designed in consideration of the nature of users in the sub-Saharan region.

This study differs from the current study in a way that it considered only the ICT as the only factor to be improved in order for DL programs to be effective. It is silent on other factors like the administrative role, staff training in all areas and learners' support systems.

However, this study relates to the current study in that it emphasized the importance of staff training in pedagogy. The study further noted the provision of infrastructure for ICT and technical staff to provide support in ICT. All the above are some of the factors that the current study is taking care of.

28. **(Kumutha and Hamidah, 2014)** conducted a study titled " Barriers Teachers Face in Integrating ICT During English Lessons: A Case Study".

This study aimed at determining the reasons teachers do not use ICT in the classrooms, even though they are provided with sufficient technical support. A total of twelve English teachers from an Independent Chinese secondary school were interviewed and their views were analysed through thematic content analysis.

The study employed a methodology that is qualitative in nature; seeking teachers' voices towards the integration of ICT.

The findings of the study revealed that teachers were reluctant to the use of ICT in the English language classrooms.

The study findings revealed that teachers were over-loaded with a lot of tasks and saw the ICT utilization as a burden.

The findings revealed that one of the factors that hinders the teachers' decision to integrate ICT was the non availability of time.

The study further established that among the 12 teachers, 2 teachers (16.67%) brought up the issue of poor ICT skills as an obstacle for them to incorporate the ICT tools in English language classrooms.

This study differs from the current study in that its concerns is only on English language. It also considered only the teacher and learner is not taken care by the study.

However, the study relates to the current study in that it emphasizes the aspect of ICT in teaching. It also advocated for staff training inorder to be equipped with skills in ICT.

29. **(Ohene and Essuman, 2014)** conducted a study titled " Challenges Faced by Distance Education Students of the University of Education, Winneba: Implications for Strategic Planning".

This study aimed at exploring and providing an up-to-date picture of the challenges faced by DE students in their quest to study at the university level.

 The study adopted both qualitative and quantitative research designs with interviews and questionnaire as the data collection techniques.

One hundred and fifty-six students comprising sixty-eight males and eighty-eight females took part in the study.

The study findings revealed that there was lack of institutional support because of late release of quiz and examination results.

The study revealed that almost all respondents appreciated the cordial relationship that exists between tutors and students during tutorial sessions.

The study further revealed that learning materials have been designed in a learner-friendly manner, thereby making it easy to read and understand.

The findings of the study established that lecturers give constructive feedback to them, which encourages them to stay focused.

The findings further established that students received support from fellow students (peer support).

This study differs from the current study in that it was conducted in Ghana and data was from on institution which could have limited the results.

However, the study relates to the current study in a way that it points out some of the concerns which the current study intended to address.

30. **(Ochwo et al., 2018)** conducted a study titled" Efficacy of information and communication technology in digitalized students' records management in universities in Eastern Uganda.

This study aimed at examining the efficacy of adopting information and communication technology (ICT) in digitalized students' records management among university staffs in Eastern Uganda.

The study adopted a cross-sectional and descriptive survey designs.

The population was 402 staff members involved in students' records management.

The findings of the study revealed that the level of ICT adoption and digitalised students' records management in the universities was generally moderately high.

The study further revealed that an increase in the level of ICT adoption was associated with higher effectiveness of digitalized students' records management and vice versa.

The study established that some of the reasons for the low level of ICT adoption may include the fact that most respondents reported that there were little equipment such as computers for the staff and this affects adoption of ICT.

The findings indicated that there was a moderate correlation between the level of ICT adoption and the effectiveness of digitalised students' records management.

This study differs from the current study in that it considered only ICT adoption in student record management. This is mainly a management aspect and it leaves out other components like the instructors, environment and others.

The study however, relates to the current study in that its findings suggest a reduction in the delays in processes and saves time on part of the students. It also advocates for administration to avail the ICT equipments and also provide training to staff. This is very important for distance learners that they will be served efficiently and effectively.

2.10 Research Gap

The studies conducted so far on distance learning in Uganda basing on the literature reviewed, looks at general provision of the program with regards to information communication technology. The specific aspects of administration, academic and technology on their impact on distance learning are not well addressed. Therefore, this study aims at addressing this gap.

Chapter Three

Methodology

3.1 Introduction

This study aimed at identifying the challenges faced by Ugandan universities in the management of distance learning programs. This chapter focused on the methodology and procedures that were adopted in conducting this study. The chapter has the following sections: research location, research design, target population, sampling design, sample population, instrumentation, reliability of research instruments, validity of research instruments, piloting, data collection procedures and methods of data analysis.

3.2 Research location

The study was conducted in five universities of which three were private and two were public universities. The universities include; Islamic university in Uganda, Kampala International university, Kampala university, Kyambogo university and Makerere university.

The universities were selected through purposive sampling technique of which they represented the private and public universities in this study (Yin, 2009). All these universities are well located in Kampala city and Mbale. It is important to note that when the inquiry is confined to a small universe and the sample also to be kept small, then the purposive sampling can serve the purpose well. Research methodology is a plan of action, strategy or a way through that a researcher choose and use to be able to reach the desired results (Mugenda, 2003).

Purposive sampling can also be used when a known characteristic of the universe is to be studied intensively (Kothari, 2004a). Purposive sampling was applied to

identify the five participating universities. Purposive sampling is a non-probability sampling technique. It does not involve probability criteria of calculating or planning of the how the population will be represented. It is important to note that, the researcher has a free hand of selecting the representative population based on the study objectives and accessibility of the selected sample. The inclusion criteria is not predetermined, rather, the researcher is at liberty to make a decision based on the study variables and constructs (Lucas, 2014). It is on this that the researcher based to select the universities for inclusion in the study.

The five universities were selected because they aspire to meet the needs of the wider community. The universities need to meet the social demand for education and training as reflected by the increasing enrolment figures of UNEB 2016 advanced certificate of education. However, to achieve the universities' objectives, there should be ways to put in place in order to bridge the challenges being faced in distance learning at the universitie**s.**

3.3 Research design

The study adopted a descriptive design; descriptive design is a method of collecting data by interviewing or administering questionnaire to the sample of individuals (Orodho, 2008). The researcher employed both tools in data collection exercise. According to (Kothari, 2004a), a research design is a blue print of the research. It is the action plan for getting from here to there "where" here" is the question to be answered and "there" is the conclusion and answers about these questions". He says that action plan should guide the researchers in the process of collecting, analyzing and interpreting data. A research design, he explains, is the logic that links the data to be collected and conclusion to be made to the initial questions of the study. The

design was applied because the study was to establish the academic, administrative, and ICT related challenges in the universities.

The key variables of this study were;

Academic factors, administrative factors and technological factors and how they influence distance learning in Ugandan universities.

This design was appropriate because of the purpose and objectives of the study. (Travers, 1969) argued that descriptive design is applied to establish the nature of existing conditions. On the purpose of the descriptive design research, (Good, 1963) notes that they include;

A. To secure evidence concerning all existing situations or current conditions.
B. To identify standards or norms with which to compare present conditions in order to plan the next step.
C. To determine how to take the next step having determined where we are and where we wish to go.

Descriptive design studies have the following advantage according to Robinson (Robinson, 1993).They provide a relative simple and straight forward approach to the study of values, attitudes, beliefs and motives.

They may be adopted to collect generalizable information from any human population. According to (Mugenda and Mugenda, 1999), descriptive design is probably the best method to social scientist and other educators who are interested in collecting the original data for purpose of describing a population. (Sekran, 2007) argued that descriptive survey research is aimed at producing statistical information on education aspects that interest policy makers and educators. Descriptive research was suitable to this study since it sought to investigate the academic, administrative and ICT related challenges in distance learning in Ugandan universities. Descriptive

research design deals with both qualitative and quantitative data which the instruments in this study were intended to gather.

3.4 Target population

3.4.1 Institutions.

The institution targeted were five universities, of which three were private and two were public. These included (IUIU, KIU, KU, KYA, and MUK). (Orodho, 2008) observed that specifying the population to be involved in the study is very important because it helps the researcher to make decisions on sampling and resources to use.

3.4.2 Respondents.

The five institutions were represented by students, academic staff and administrative officers. A total of 332 students took part in this study, 109 teaching and non-teaching staff took part and 20 participants from NCHE took part in the interview for this study.

Table 3.1 Respondents

Respondents	Population
Students	332
Lecturers/ Administrators	109
NCHE	20
Total number of respondents	461

3.5 Sampling design.

3.5.1 Institutions.

Five sampled universities were purposively for the study. IUIU were sampled purposively because it was the private university in Uganda at the time of data collection. MUK was chosen because is the oldest university in Uganda and was the one that started distance learning program in Uganda. Other universities including KIU, KU and KYA were chosen because of their proximity and logistical issues.

Table 3.1 shows the samples studied in all the five universities. The study settled for a sample size shown in table 3.1 because for descriptive studies 10% of the accessible population is enough (Gay, 2002), and (Kasomo, 2006) . On a similar point, (Gay, 2002) further argued that stating the sample size and sampling procedures help the researcher to establish representativeness of the sample for generalization. (Kombo, 2006) added that researcher selects a sample due to a number of factors which may not allow the studying of the whole population. This is in line with (Sekran, 2007) who noted that sampling procedures are ways and means that are used to select a sample from a target population. (Daniel, 2012.), argue that the decision to sample or take a census of the whole population depends on a number of factors. Some of these include: the inability to gain access or locate the participants within a population, the uncertainty to the response rate and having a small target population. (Creswell, 2012) , observed that the general principle is to select a large sample as is possible that allows for statistical tests and is also representative of the population; the larger the sample, the less the sampling error (potential error that the sample will be different from the population). According to (Pearson, 2010) the rule of thumb backed by the Central Theorem is that the

sampling distribution of any statistics will tend to display a normal distribution if the sample size is large enough by thirty (30) to fifty (50) observations.

The five universities sampled purposively represent 72.1% of the respondents and this percentage was suitable for this study since it is bigger than the 10% recommended by the research experts.

Table 3.2 Sample Matrix

Respondents Category	NCHE	IUIU	KIU	KU	KYA	MUK	SAMPLE	
Students	-	82	50	40	60	100	332	
Academic staff	-	25	14	10	15	15	79	
Non-academic staff	-	08	06	05	06	05	30	
NCHE (staff)	20	-	--	-	-	-	20	
Total number of respondents	20	115	70	55	81	120	461	

3.6 Instrumentation

In conducting this study, the researcher used a number of instruments to collect data. According to (Neuman, 2011) : (Czaja, 2005) the main techniques for collecting information in research are observation, interviews, questionnaires and the use of records for content analysis. One of the appropriate instruments for this study seemed to be a questionnaire. (Czaja, 2005) considered a questionnaire as "the conduit through which information flows from the world of everyday behavior and opinion into the world of research and analysis". Further stress that the questionnaire is the link to the phenomena that the researchers wish to study. (Neuman, 2011) observe that a questionnaire is a set of questions for gathering information from individuals. The following instruments were used;

(a) Questionnaires; the questionnaires were in two categories for students and lecturers/ administrators. The questionnaires were preferred by the researcher to collect data because of the large group of the respondents who were targeted from the five universities within a short time, with minimal costs to incur. These tools were also used to gather data because of the research design employed in the study and to ease data analysis.

(b) Interview schedules; interview schedule for quality assurance department (NCHE), interview schedule for finance (NCHE), interview schedule for research and publication (NCHE). The interview schedules were used to collect data in this study because they targeted the NCHE as the regulators of the program in the country and could not have time for the questionnaires. The same instrument was used to the different members of departments that took part in the study.

It was also found that interview schedules were considered flexible and adoptable to the researcher

3.6.1 Student Questionnaire.

The investigator used the questionnaire to obtain data and views in a structured form from the respondents(Karim, 2017). (Sekran, 2007) observed that it is a method of collecting information through administration of questionnaire to a sample group. In a descriptive study, questionnaires are also suitable because results tend to be more dependable and reliable since the respondents have time to give a well thought out answer, (Kothari, 2004b) . Two sets of questionnaires comprised of multiple choice questions. The questionnaires were designed for the students participating in distance learning programs. The questionnaires were used for these particular respondents because of their suitability to collect data from large numbers of individuals. Respondents filled in the questionnaires which were distributed and collect by the research assistants. Each university had one research assistant.

3.6.2 Lecturer/ Administrative Questionnaire.

The investigator used the questionnaire to obtain data and views in a structural framework from respondents (Karim, 2017). The questionnaire consisted of multiple-choice questions. The questionnaires were designed for academic staff involved in distance learning and administrators at the department of distance learning. The questionnaires were used to these particular groups because it was easy to collect data from these individuals. Respondents filled in the questionnaires which were distributed and collected by the research assistants.

3.6.3 NCHE Interview schedule.

Interviews were conducted to examine the existence of academic, administrative and ICT related challenges in distance learning and how to overcome them. Views were sought from the respondents. The interview method yields rich sources of data on peoples' experiences, opinions, aspirations and fillings (May, 1993). This method was found to be interactive and enabled the researcher cover the phenomenon under investigation in great depth (Mwanje, 2001 a). Most researchers maintain that interviews are one of the appropriate tools to enable the researcher to arrive at an in-depth understanding of events or experiences (Denscombe, 2014); (Yin, 2009); (Elizabeth, 2004). The interview is one of the most important sources of case information gathering in research (Elizabeth, 2004); (Yin, 2009) ; (Johnson, 2012b): (Denscombe, 2014). (Elizabeth, 2004) further observe that the aim of the interview is to bring to our attention what individuals think, feel and do and what they have to say about it in an interview. (Johnson, 2012a) argue that "qualitative interviewing allows a researcher to enter into the inner world of another person and to gain an understanding of that person's perspective".   Interviews were conducted among officers in the finance department, research and quality assurance departments of NCHE. The researcher collected views from 20 respondents.

3.7 Reliability of Research Instrument.

Reliability is a measure of the degree to which a research instrument yields consistent results (Mugenda and Mugenda, 1999). A test must be valid in order for it to be reliable. The split-half method was used to establish the coefficient of internal consistency of the questionnaires. Split-half is a measure of internal consistency-how well the test components contribute to the construct that is being measured. Reliability of the test instrument seeks to establish that the instrument yields

consistent results both within the test items and from the respondents. According to (Dick, 2014.) reliability should yield consistency despite the change of test administrators or use of alternative forms of the test. This implies that the instrument is confined to testing a single construct which should not change regardless of the test items. (Salkind, 2010) argue that "a reliable instrument should have a small random measurement error and also measure one single dimension" where random measurement error is the major cause of inconsistencies affecting reliability.

According to (Gay, 2002) and (Louis et al., 2007), this method involves splitting the statements (items) of a test into halves (odd and even numbered items). Then the odd numbered and even numbered items are placed in subsets and scores of the two sub-tests are computed for each individual and correlated using the Pearson's product moment correlation coefficient formula. Pearson's correlation coefficient is often referred to as the Pearson R test. It is a statistical formula that measures the strength between variables and relationships. The formula is given as follows;

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

Where N= number of pairs of scores

Σxy = sum of the products of paired scores

Σx = sum of x scores

Σy = sum of y scores

Σx^2 = sum of squired x scores

Σy^2 = sum of squired y scores

Table 3.3 shows the reliability coefficients obtained for the three questionnaires whose reliabilities were tested. The instruments were therefore considered reliable since the general rule of thumb in research is that reliability should be at least 0.70 (Orodho, 2005).

Table 3.3 Reliability Coefficients for Questionnaires Reliability Statistics

Cronbach's Alpha	Number of items
.728	20

The tables show that the instrument for collecting data on students was 72.8%reliable for data collection. The Cronbach alpha is above 0.50

Reliability statistics for Administrators.

Cronbach's Alpha	Number of items
.790	16

The table above shows that the instrument for collecting data on lectures/ Administrators was 79.8% reliable for data collection. The Cronbach's Alpha is above 0.50.

3.8 Validity of Research Instruments.

Validity is the degree to which results obtained from the analysis of data actually represent the phenomenon under study (Mugenda and Mugenda, 1999). (Frank-Stromberg and Oslen, 2004) stated that content validity is a process aimed at providing assurance that an instrument (checklist) questionnaires or scale measure the content area it is aimed to measure. Validity strives to reassure all that the instrument actually measures what it intends to measure. The results from the study

should depict the actual state of the population being studied. (McBurney and White, 2009.), argue that a study is believed to be valid if the conclusions correctly reflect the actual state of the world even if the results may not be generalizable. They further observe that there are four (4) types of validity: internal, external, construct and statistical validity. Internal validity seeks to establish that the established relationship between the independent and dependent variables can logically be explained without the interference of other variables. That even though it is not possible to completely eliminate all intervening variables, such variables have been identified and successfully avoided. To determine the validity of the items in the research instruments, a pilot study/pre-tests was done to selected group. The researcher utilized content validity and construct validity. (Wilson et al., 2012) cited Law She (1975) that it has been widely used to establish many fields including healthcare, education, development, personal psychology and marketing research. (Lawshe, 1975) suggests that based on the "psychological principles" a level of 50% agreement gives some degree of assurance of content validity. The instruments were therefore scrutinized by expert judgment of scholars in the field of education. They focused on academic, administrative, and technological related issues in distance learning to determine whether the items in the instruments adequately addressed the objectives of the study. The formula as put up by Law She is as follows;

$$\text{CVR=}ne = \frac{(NF2)}{\frac{(N)}{2}} \quad ne = \text{Number of panel members indicating an item essential}$$

N = Number of panel members.

3.9 Piloting.

Pilot studies are small-scale, preliminary studies which aim to investigate whether crucial components of a main study-usually a randomized controlled trial (RCT) - will be feasible. (Thabane et al., 2010) argued that it is a small scale preliminary study carried out in order to establish the feasibility, time, cost .adverse events and make the necessary changes on the study design before a full scale research project. (Barker, 2003), defines a pilot study as a procedure for testing and validating an instrument by administering it to a small group of participants from the intended test population. This study is conducted prior to the main study to determine whether the methodology, sampling, instruments and analysis are adequate and appropriate (De Vos et al., 2011).

After piloting, the researcher ensured that the questions were comprehensive, instructions were clear or non-ambiguous, determined how long respondents took to complete questionnaires, and noted the respondents' objection about answering questions. Piloting assisted the researcher on how to analyze data collected.

The researcher conducted piloting in one university that is Uganda technology and Management University (UTMU). During piloting, the three questionnaires were distributed to the respective respondents and then collected after being filled. The completed questionnaires were analyzed and the results were used to revise the items in all the questionnaires. The researcher sought expert from the department of education management. The aim was to establish if the instruments were workable and to develop ways of improving them. University selected for piloting was not included in the actual study.

3.10 Data Collection Procedure.

Data was collected in phases.

Phase one: the researcher sought permission for data collection from the various institutions selected for the study by making physical visits. The researcher also sought permission from NCHE to collect data from there for this study.

Phase two: questionnaire administration: the researcher used five research assistants who were identified. They were briefed on how to administer questionnaires among the respondents targeted. Each research assistant took charge of a particular university. The research assistant distributed the questionnaire to the respondents and collected the filled questionnaires after an agreed period of time. All filled questionnaires were submitted to the researcher for further processing.

Phase three: The researcher arranged for an interview with some officers in the quality assurance, finance and research departments. Each day had one day for engagement. The researcher took six months to complete the data collection exercise.

3.11 Methods of data analysis.

After the data had been collected, the researcher took on to the task of analyzing it. The analysis took a number of activities such as establishment of categories, the application of these categories to raw data through cording, tabulation and then drawing statistical inferences (Kothari, 2004a). The researcher double-checked the instrument ensuring that they were complete. The information was summarized and the statistics derived. The data was subjected to descriptive analysis including a range of both qualitative and quantitative treatments. SPSS was applied in data analysis. Qualitative was analyzed by establishing the categories and themes, relationship/patterns in line with the study objectives (Van Dalen, 1962). Descriptive analysis was used because it enabled the researcher to inspect the variable, in their areas of study. Tabulation enabled the researcher to categorize the subject in the research. Tabulation was a part of technical procedure in which the classified data was put in the form of tables (Kothari, 2004a). The frequencies enabled enhanced analysis of the continuous variables. Data was presented by use of tables, frequencies and percentages.

Chapter Four

Data Presentation, Analysis and Discussion of findings.

4.0 Introduction

This chapter presents the findings of the study on the challenges of distance learning in Ugandan universities. The study aimed at establishing how the academic, administrative and technological factors influence distance learning in selected Ugandan universities.

Data was collected through administration of questionnaires to students participating in distance learning programs in the five selected universities; questionnaires were administered to lecturers and administrators who were participating in distance learning programs.

Data was also collected through interviews from the departments of finance and quality assurance for (NCHE). The data collected was coded then fed into the computer using the statistical package for social science (SPSS). The data was then analyzed based on the hypotheses that were stated in chapter one.

To maintain the flow of ideas in the study; the presentation, analysis and interpretation of data was arranged according to the research hypotheses.

4.1 Hypothesis one

The hypothesis stated as: Academic factors have a relationship in influencing distance learning in Ugandan universities.

To answer the above assertion, seven questionnaires were administered to 332 students to capture data on face-face sessions whether students got necessary

support, knowledge and experience of lecturers, technical skills for teaching in distance learning, peer support, basic computer knowledge and research as part of the course requirement. The answers got from the respondents enabled the researcher to secure necessary answers to the above assumptions.

4.1.1 Presentation, analysis and interpretation of questionnaire data.

Data was analyzed for each key component using frequencies, and percentages. This section has been arranged under the sub headings; face-face sessions, tutorials as learners' support, rating of lecturers as being caring, creative, and interactive, technical skills of lecturers, peer support, possession of basic computer knowledge, research regarded as a course requirement.

4.1.2 Face to Face Sessions

Table 4.1 showing whether during the face to face session, students get the necessary support from lectures.

	Frequency	Percent	Valid percent	Cumulative percent
SD	13	3.9	3.9	3.9
D	40	12.0	12.1	16.0
N	53	16.0	16.0	32.0
Valid	145	43.7	43.8	75.8
A	80	24.1	24.2	100.0
SA	331	99.7	100.0	
Total	1	.3		
Missing system	332	100.0		
Total				

Source: primary data

Students were asked whether they receive necessary support from their lecturers during face to face sessions. The support included encouragement to participate, generating questions and comments from the lecturers,13(3.9%) of the respondents strongly disagreed that they got necessary support from the lecturers, 40(12.1%) disagreed that they never got the necessary support, 53(16.0%) indicated that they were neutral to the assertion, while 145(43.8%) indicated that they received the necessary support from the lecturers, 80(24.2%) strongly agreed with the statement that they receive the necessary support from their lecturers. These results for those who supported the view that they received necessary support during face-face sessions are in agreement (Tsagari, 2010   ).

In CS, DL students are provided with opportunities for peer interaction, collective guiding, counseling and guidance, clarification of doubts, and problem-solving in using self-learning materials, receiving feedback in specific and difficult concepts/areas, assignments, examinations, etc. (Rowritree, 1992), (Simpson, 2002).

DL that believes in the provision of student support service accommodates face-face CS to help students in their study. A number of such institutions make attendance in CS voluntary (Keegan, 2000). In such cases, CS plays a supplementary role by providing only revision, tutorial, practical and seminal sessions. The result of the study showed that the majority of students value the contribution of CS in supporting their studies.

According to (Deans, 1998) the feedback received from the instructor in distance education plays a part in the success of the student. The lack of effective feedback "is the potential "Achilles heel" of distance education (Willis, 2002). Therefore, instructors need to ensure that feedback is integrated into the instructional design process of distance learning classes. (Ojacheta, 2010) argued that ODL to be effective the following should be addressed; the mission; programmes and curricula;

teaching and learning strategies; learning materials and resources; communication between teachers and learners; interaction between learners; support delivered locally; the delivery system; the student and tutor sub-system; staff and other experts; effective management and administration; the requirements of housing and equipments; and, evaluation. (Dea Lerra, 2014)   in the study conducted in Ethiopia observed that respondents clearly rated the support services as poor. Respondents indicated that the academic support provided was insufficient and the assignments were not submitted on time. It was further noted that respondents felt unhappy with the feedback on assignments which was not immediate and individual support was inadequate. (Muirhead, 2000) argued that absence of face-to-face contact with professors and learners raises concern about the affective dimension of distance education. Effective communication between teacher and learner is essential to sophisticated learning experiences and academic collaboration is a vital integrating factor that helps learners to successfully negotiate graduate school. (Marshall, 1995) argued that learners devote significant time communicating with professors during class assignments, during comprehensive exams and during thesis or dissertation process. In gaining the success of the study, in addition to student characteristics and internal factors owned by students, the higher education should provide more support and attention to the success of their students' study. (Dharmayana, 2012) observed that student engagement is a process that shows the attention, interest, investment, effort and involvement of students used in learning.   Student engagement is positively associated with student achievement and plays a significant role in the success of the learner (Carini, 2006); (Kuh et al., 2006) ; (Dharmayana, 2012); (Chi, 2014). (Fredricks, 2004) in his study on student engagement established that it consists of three dimensions which include; the emotional dimension which involves the positive and negative reactions to the teacher, other students and classroom activities; the behavioral engagement relating to participation or physical

116

involvement. The third is cognitive which involves in the desire to make efforts in order to understand complex ideas and master the difficult skills. Internal and external factors which have positive influence on students, will trigger the student to be actively involved in a variety of academic and non- academic activities that will develop the student potential. Students with high achievement motivation, high interest in major and high academic self-concept will have high student engagement in taking their studies in higher education (Gibbs, 2010); (Cazan, 2014) . According to (Ani, 2013) ; (Rigg, 2013) ; (Juwita and Kusdiyati, 2015) support from external factors also becomes the trigger for the students who have high student engagement. (Liana, 2013) in the study established that the motivation to learn affect positively on academic achievement (GPA) of the students. (Kpolovie, 2014) argued that interest in learning is significantly related to the student's academic performance and can significantly predict the academic achievement. (Arefi, 2014) stated that academic self-concept is significantly correlated with student achievement.

4.1.3 Tutorials as learners' support

Table 4.2 Students receive tutorials as learners' support system

	Frequency	Percent	Valid percent	Cumulative percent
SD	16	4.8	4.8	4.8
D	51	15.4	15.5	20.3
N	64	19.4	19.4	39.7
Valid	125	37.7	37.9	77.6
A	125	22.3	22.4	100.0
SA	74	22.3	100.0	
Total	330	99.4		
Missing system	2	.6		
Total	332	100.0		

Source: Primary data

Respondents were asked whether students receive tutorial as support to their learning, 16(4.8%) strongly disagreed that they receive tutorial as learners' support, 51(19.4%) disagreed with the statement of tutorials as support to their learning, 64.9(19.4%) took a neutral position about the tutorial support, 74(37.9) strongly agreed that tutorials as learners' support system were in place. A number of such institutions make attendance in CS voluntary (Keegan, 2000). In such cases, CS play a supplementary role by providing only revision, tutorial practical and seminal sessions. No new topics/are taught apart from those contained in the self-instructional course materials.

Respondents commented that some of the learning modules are full of assumptions making self-learning difficult while other remarked that the practice of citing foreign

example is not helpful to their studies. Some respondents expressed dissatisfaction with grammatical errors and missing pages in some of the learning modules. Learner support generally refers to interactive activities and service that are meant to support and facilitate the learning process. As already indicated support is essential because of the separation between the learners and educational provider. Broadly, such services include teaching, tutoring, counseling, advising and administrative services. (Simpson, 2003) considered learner support services as being measures that go beyond the production of study materials and support the learning process. He further identified and differentiated between academic and non-academic support. (Onyemaechi, 2013a) observed that learner support remains the backbone of distance education delivery in sub-Saharan African countries. There exists a growing need to build learner support into distance education programmes, especially for learners in the tertiary institutions.(Gameel, 2016) observed that tutoring is done by part-time tutors who have no full commitment to the college or teaching schedule. They are graduates of other medical schools; they have no formal training in tutoring. According to the students' feedback, most of the tutors answer the questions without any problem discussion. According to study conducted by (Dea Lerra, 2014) the findings revealed that majority of the stakeholders strongly agreed that tutorial classes though not regularly held by expert tutors, they are helpful to them. Both the coordinators, tutors and learners claimed that the time allocated for tutorial classes was not sufficient to cover the syllabus. The tutors and some learners underlined the need to making the tutorial classes compulsory. The center coordinators and FGD groups suggested that the tutors should be given training on DL system at private higher institutions.

4.1.4 Lecturers rated as being caring, confident, and interactive.

Table 4.3 the lecturers were rated as being caring, confident, experienced, creative and interactive.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	SD	28	8.4	8.4	8.4
	D	39	11.7	11.7	20.2
	N	56	16.9	16.9	37.0
	A	116	34.9	34.9	72.0
	SA	93	28.0	28.0	100.0
	Total	332	100.0	100.0	

Source: Primary data

The findings revealed that 28(8.4%) of the respondents strongly disagreed that the lecturers were caring, confident and interactive during the course of study, 39(11.7%) disagreed that lecturers were caring, confident and interactive 56(16.9%) indicated that were neutral on this subject matter, 116(34.9%) agreed with the statement that lecturers were caring, confident, and interactive 93(28.0%) strongly agreed that the lecturers were rated as caring, confident, experienced, creative and interactive. Therefore, Ugandan universities should strive to have adequate teaching staff with higher education course design and development competence.

Moreover, (Altibach, 2001) and (Bloom et al., 2006) affirm that high quality higher education is a leading instrument for promoting socio-economic development. Thus, universities in Uganda must invest a considerable amount of time and funds in attempt to improve their core activities of teaching and learning, research, innovation

and community service (Kasozi, 2003); (Kibwika, 2006);. Almost all respondents appreciated the cordial relationship that exists between tutors and students during tutorial sessions. Also, majority agreed that learning materials have been designed in a learner-friendly manner, thereby making it easy to read and understand. Respondents also indicated that lecturers give constructive feedback to them, which encourages them to stay focused. In a study conducted at Kenyatta university, established that majority of the respondents (43%-Agreed; 16.4%-Strongly Agreed) cited lack of instructor's contact and inadequate academic support as one of the major instructional challenges. Indeed, a majority of the students (38.6%-Agreed; 13%-Strongly Agreed) felt that the teaching was lacking in interactivity and there was no follow-up on discussions and quizzes (Mukirae et al., 2016). (Dea Lerra, 2014) observed that respondents were not happy with counseling support provided for distance learners. Limited time availability of lecturers to provide guidance, mentoring or discussions with students is believed to be one of the reasons why the interaction between students and lecturers is not enough. (Farchaini Budi Astuti, 2016) observe that the institutions of higher education can improve on these conditions by organizing a sharing session program as many as two or three in a semester. It is hoped that students have an opportunity to present their academic and non- academic problems which they face and therefore, lecturers and academic counselors can provide guidance and solutions.

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4.1.5 Satisfied with the technical skills of lecturers.

Respondents were asked whether they were satisfied with the technical skills of the lecturers who teach.

Table 4.4 satisfied with the technical skills of lecturers who teach

		Frequency	Percent	Valid percent	Cumulative percent
NO		17	5.2	5.2	5.2
		209	63.0	63.3	68.5
YES		103	31.0	31.2	99.7
Valid		1	.3	.3	100.0
2.00		330	99.4	100.0	
12.00		2	.6		
Total		332	100.0		
Missing					
system					
Total					

Source: primary data

17(5.2%) responded with a no implying that they were not satisfied with the technical skills of the lecturers who teach, 209(63.3%) responded yes indicating that they were satisfied with the technical skills of the lecturers. Concern for how learning takes place in higher learning institutes and how instruction and assessment affect the quality of learning desirable, because students need to acquire knowledge and skills that can be transferable in the work place (Mikre, 2010); (Mulder, 2014), (Wesselink et al., 2010). McClary cites research that suggests that the role of distance learning instructor is "ambiguous and often ill-defined" with some people believing the instructor is unnecessary. However, the instructor is actually a critical

component of quality, with the instructor having an impact on student involvement in the course and learning as measured by objective performance, course grades, and student satisfaction. Further, there is a critical lack in the area of course design and production capacity, such as in the development of multimedia materials. The lack of competent people to manage and use e-learning systems has equally retarded smooth transition from conventional learning methods to e-learning. Until recently, most facilitators in higher institutions in Uganda were people of 50 years and above who have been found to be resistant and reluctant to adopt technology (Kasse et al., 2015). (Bigatel and Williams, 2015) in his study argue that student' satisfaction level increases when they realize that their teachers are well-trained to teach using online platforms. Other students talked about the ineffective instructors. They noted the lack of instructor involvement in the discussions and in communicating with the students and the lack of feedback on their work. (Mosha, 2014) in a study conducted at Mzumbe university in Tanzania, established that lack of skills on how to search internet resources, lack of consistent technical support, computer viruses which limit access to e-resources, inadequate PCs, lack of training on how to access and use e-resources and poor connectivity. (Hennessy and Onguko, 2010) observed that in Sub-Saharan Africa (Angola, Burundi, Cape Verde, Central African Republic, Chad, Comoros, Djibouti, Equatorial Guinea, Eritrea, Gabon, Gambia, Guinea-Bissau, Liberia, Mali, Mauritania, Sao Tome and Principe, the Seychelles, Somalia, South Sudan, Sudan and Zimbabwe), among the barriers to e-learning include; physical, cultural, socioeconomic and pedagogical factors , lack of electricity and frequent outages , poor technology infrastructure, overcrowded computer labs and low bandwidth, high costs of (mainly satellite), internet connectivity, software licenses and equipment maintenance, insufficient and inappropriate software. According to the study conducted by (Dea Lerra, 2014) in Ethiopia concluded that, although the qualifications of tutors appeared to be suitable,

their knowledge of DL methodology were insufficient and not satisfactory. This situation is likely to have adverse effect on the teaching and learning process and leading to lack of productivity given the unique nature of DL system that require specific types of tutors with specialized training. (ANUMAKA et al., 2013) observed that the quality of education is directly related to the quality of instruction in the classroom. It is a fact that the academic qualifications, knowledge of the subject matter, competence, skills of teaching and the commitment of the teachers have a direct impact on the teaching process. Note has to be taken that quality improvement in education depends on proper training of teachers. Teachers will only take on any of the roles if given the necessary training.

4.1.6 Peer support through discussions and reviews ideas.

Respondents were asked whether they had peer support through discussions and review of ideas

Table 4.5 showing whether students have peer support through discussions to share and review

	Frequency	Percent	Valid percent	Cumulative percent
	7	2.1	2.1	2.1
SD	18	5.4	5.4	7.6
D	25	7.5	7.6	15.1
N	141	42.5	42.6	57.7
Valid	140	42.2	42.3	100.0
A	331	99.7	100.0	
	1	.3		
SA	332	100.0		
Total				
Missing system				
Total				

Source: primary data

From the analysis of table above; 7(2.1%) strongly disagreed that peer support through discussions was provided. 18(5.4%) disagreed that peer support was available for students, 25(7.6%) showed neutrality about the subject matter, 141(42.6%0) agreed that peer support through discussion and review of ideas among students was available, 140(42.3%) strongly agreed that peer support was available for students. (Holmberg, 1982) for instance, states that peer support often proves to be very useful and successful in supplementing the study materials, focuses on examination topics and activities, offer student opportunities to interact with each other and share ideas. The opportunities offered by CS of growing relationship between members of the group was an important issue for the students overall. In the following extract, one of the participants stresses the importance of the personal contact with her fellow students and the faculty member during their peer support.

One respondent interviewed commented that; "During today's contact session I got help on how to download articles from our yahoo site, order books from the Library and extra articles from Heal link to compile references for the teaching of the four skills. I will add this to what I have gathered from books. This will help me in the organization of the assignment". Peer support that takes place through discussions enables the students to share and review ideas and provide feedback (McConnell, 2000). The students not only gain new knowledge but also acquire new social skills through communication and collaboration with their peers (Sherry, 1996a) . Peer support enables students to share advice and common experiences of the challenges of distance learning (Cain et al., 2003). Learning support during the tutorial session for ACE (Education Management) mostly takes place in the form of peer support that enables the students to engage critically in exploring and evaluating their own school situation in the process of knowledge construction

(University of Pretoria, 2010.). This agrees with the findings of the study that established that students felt that they did not receive appropriate advice provided under the umbrella of students' support services (33.8%-Agreed; 30%-Strongly Agreed). The university has a directorate of students' services (dean of students) which is housed at the main campus. However, it is not decentralized to the ODeL campuses and therefore, students on the e-learning program who spend the better part of their academic life outside the university may not be receiving advice and other forms of student support, e.g. counseling and mentorship services. The university also has a students' union headed by a president which is expected to not only act as a link between the students and the university management but also provide psycho-social support to students, for example, peer counseling (Mukirae et al., 2016). (Cain et al., 2003) in his study found that some of the students in their study regarded their peers as important learning support structure and suggested that course instructors should develop a community forum for informal peer support networks. In this study, the students were able to connect and share advice and common experiences. (Cain et al., 2003) further stated that examination of graduate distance learner's support needs also revealed that students perceive peer as an important source of academic and social support. There is a limited culture of e-learning so students drop out due to lack of peer support, feedback, encouragement and many other human factors. It is these latter factors, which restrict e-learning from being the transformational force many have predicted (Hossain et al., 2013). It is also evident that successful e-learning cannot ignore the desire for humans to socialize and effective social platforms will 'bind' and motivate distant learners. Learners will also expect support, feedback and prompt response to assessments, in addition to the stipulations for content as described above, perhaps in the form of podcasts, electronic appearances by guest speakers, simulations, tele-mentoring, threaded discussions and other innovative interactive learning opportunities (Allan

et al., 2017). Findings of the study conducted in Rwanda by (Ndayambaje et al., 2013) established that the majority of respondents (80%) said that the learning style is self-learning (individualization).

Lecturing as teaching method counts for 26.6%, tutoring represents 73.3% while they never sit in group study for discussing and they don't do any further research. These last two demonstrates clearly the lack of active participation and peer support. Peer review skills development can be linked to a learning environment that supports a process of inquiry and some level of interaction that enables students to have the confidence to inquire and share knowledge (Kahiigi et al., 2012b). Students gain confidence in their peers to be able to critique and make meaningful reviews of their submissions. In a sense, the peer review process is highly dependent on the nature of interaction and the process of inquiry. Students take more ownership of their learning processes whereas the lecturer takes on the facilitator role (Kahiigi, 2013).This implies that if the conflicts within the student groups are geared towards cognitive development, then students are given an opportunity to learn from their peers. In such situations, lecturer presence is crucial in supporting and sustaining the process of inquiry (Kahiigi, 2013).

Research comparing distance education to traditional face-to-face instruction indicates that teaching and studying at a distance can be as effective as traditional instruction, when the method and technologies used are appropriate to the instructional tasks, there is student-to-student interaction, and when there is timely teacher-to- student feedback (Moore, 1991) : (John R.VJr, 1991) .

4.1.7 Students possess basic computer knowledge.

Table 4.6 Students possess basic computer knowledge

	Frequency	Percent	Valid Percent	Cumulative Percent
SD	23	6.9	6.9	6.9
D	62	18.7	18.7	25.6
N	78	23.5	23.5	49.1
Valid				
A	123	37.0	37.0	86.1
SA	46	13.9	13.9	100.0
Total	332	100.0	100.0	

Source: Primary data

23(6.9%) strongly disagreed that students possess basic computer knowledge, 62(18.7%) disagreed with the idea that students possess basic computer knowledge, 78(23.5%) were found to have a neutral position regarding the subject matter, 123(37.0%) agreed that the students possess basic computer knowledge, 46(13.9%) strongly agreed that the students possessed the basic computer knowledge. Scholars and students lack far more new skills in the use of computers. More fundamentally, educational consumers and providers in poorer countries lack affordable computers, reliable internet connections, and access to online scholarly material. Most current estimates are that, except for a very few countries in Africa, less than 2% of the population is actively online. There is the lack of familiarity with how to use computers, which inhibits their use by both teachers and learners, especially if there is no expectation that computers should be used for research, writing, assignments, etc. IT infrastructure was seen to have a significant impact on the adoption of e-learning and this is in uniform to studies like (Eze et al., 2013); (Hasanzadeh et al.,

2012); (Namisiko et al., 2014); (Sharma et al., 2011). Lack of experience and/or training with instructional technologies was also given as a major challenge (38.2%-Agreed; 15.5%-Strongly agreed) as observed by the findings of the study in Kenya by (Mukirae et al., 2016). To participate in the knowledge economy and the information society, students need to acquire the skills necessary to respond to opportunity and uncertainty, think critically, collaborate, communicate, solve problems, create, and continue to learn (Kozma, 2008b). (Hollow, 2012) points out that adoption of ICT within education is an inherently positive trend and a causal factor in promoting growth, primarily defined through economic criteria. The increasing interest in the use of ICT in education can also be partly attributed to the fact that education systems need to prepare students for lifelong learning in the information society (Obadić, 2010). According to the study findings of (Kahiigi, 2013) revealed many students lacked knowledge on ICT. This can be attributed to the lack of Internet literacy skills the students demonstrated, namely: ability to evaluate, critique, and make decisions about a variety of sources and content. One of the students commented that "...many students start using ICT at university level and as a result they don't have the necessary experience to apply it to their learning process..."; another student mentioned that "… most students and lecturers lack skills that are mandatory for effectively utilizing technologies in their teaching and learning activities…". (Min-ling Hung., 2010) suggests that learners should be helped to identify their skills, pointed out one of the skills a computer and internet self- efficacy. This refers to learners' perceptions about skills to use computers and internet to accomplish a task. While only handful of people has total access to technology, a large number cannot get access to these new tools and services such as computers, other digital devices and internet. The inequality in access is determined by numerous factors such as availability and reliability of infrastructures, gender, economic status, skills in use (e-competence), and motivation of the users

(Oroma et al., 2012). Further argue that another factor of hindrance to technological access is the level of skills and competence (e-competence) in the use of these technologies. Since it is a new field, only few people are knowledgeable in its use and the potentials it presents in all aspects of human life (Oroma et al., 2012). According to (Mavengere, 2010) in the study conducted in Botswana and the Catholic University of Mozambique established that five factors which affect the learning management systems in African universities which included, computer literacy, computer infrastructure, collaboration/ sharing culture, human resource (IT staff) and leadership support. According to a study in *Nigeria* conducted by (Olasina, 2012) at the University of Ilorin established that learners' technical skills and e-learning infrastructure are not adequate to meet e-learning requirements. Lim (cited in (Olugbeko, 2013) noted three barriers to e-learning education which include, professional development, time and support.

4.1.8 Research is highly regarded as part of the course requirements.

Research is the salt of higher education. Whoever funds higher education institutions, should fund research as the major activity of Universities.

Table 4.7 research is highly regarded as part of the course requirements.

	Frequency	Percent	Valid Percent	Cumulative Percent
SD	9	2.7	2.7	2.7
D	14	4.2	4.2	6.9
N	21	6.3	6.3	13.3
Valid				
A	154	46.4	46.4	59.6
SA	134	40.4	40.4	100.0
Total	332	100.0	100.0	

Source: Primary data

From the analysis of the table above, 9(2.7%) strongly disagreed that research was highly regarded as part of the course requirement, 14(4.2%) disagreed with the statement research was regarded as a key component of the course, 21(6.3%) were found to be neutral in regard to the subject matter, 154(46.4%) were found to have agreed that research was a key component of the course, 134(40.4%) strongly agreed that research was regarded highly as part of the course requirements.

The general problems of our education system are, first the current education does not encourage production of knowledge through research, debate, observation or innovation at all levels of the system. In the primary and secondary levels, the teacher is the master, the colossus who knows everything and does not allow initiatives from students that could undermine his position or his major aim: to make students pass in grade one and proceed to the next level.

This in line with (Kasozi, 2013) who noted that, Universities are viewed as teaching rather than research institutions and government funding and private contributions to Universities focus on teaching. We can note that, there is always more celebrations and jubilations during graduation ceremonies than at publications of researched materials or books. (Traxler, 2018) postulates that in earlier decade, as higher education was opened up to a larger and larger number of institutions and as student numbers has risen, had seen the increasing professionalization of teaching, perhaps in order to assert the status of those less research-active institutions and less research-active faculty. He further observed that the staffing of distance learning may be at the margins of these changes and more vulnerable. where sector diversification is "a shift from a preponderance of higher educational institutions being (or at least aspiring to be) research universities toward a cadre of short-cycle, less-expensive,

less-selective, more vocationally oriented, and more hierarchically managed institutions, whose faculty are oriented to teaching rather than to research," where privatization is "part and parcel of the neo-liberalism ideology which is prevalent in many countries in the Asia Pacific region" and globally, the academic profession faces several issues, relating to academic freedom, governance of higher education institutions, faculty compensation, politics and civility, conflicts of interest, hiring and promotions, and faculty workload (Traxler, 2018). (Kyaligonza, 2009) in the study conducted in Ugandan public universities found that public universities in Uganda are failing to fully fulfill the functions of higher education as they lag behind in research, they emphasize teaching at the expense of research. Government was found not doing enough in investing in university research, it is giving lip service in giving remunerations and motivate research supervisors, acquire research equipment and facilities like computers, internet facilities, libraries and workshop facilities in addition to deliberately provide funds for research.

4.1.9 Study materials are provided on time to students.

Table 4.8 Study materials are provided on time to students

	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
SD	39	11.7	11.7	11.7
D	78	23.5	23.5	35.2
N	60	18.1	18.1	53.3
Valid				
A	97	29.2	29.2	82.5
SA	58	17.5	17.5	100.0
Total	332	100.0	100.0	

Source: Primary data

The table above reveals that, 39(11.7%) strongly disagreed that study materials are provided to students on time, 78(23.5%) disagreed with the assertion that study materials were provided on time, 60(18.1%) were found to be neutral in regard to the above subject matter, 97(29.2%) agreed that the study material were provided to students, 58(17.5%) of the respondents strongly agreed that study materials were provided to students on time.

This result implies that students on distance programs in Uganda don't receive enough study materials to enhance their studies. Distance education in Africa is still largely paper-based which has several limitations. For example, at the University of Education Winneba (UEW), Ghana, distance students are given paper-based instructional materials which students receive late and in some cases, do not reach them at all (Ohen and Osuman, 2014). The questionnaire and during the interview students were asked to share their opinion on instructional challenge that they had.

The responses indicate that most of them (5 out of 7) had issues with various aspects of instruction. For instance, two interviewees commented that; Instructional materials come to students late; in some cases we do not get the books at all. Most students complain bitterly when they are asked to consult tutors and collect their modules for photocopy. Their complaints are that when modules or books are in the manuscript form they look voluminous and difficult to photocopy the document and even read, on top of that they have no money to do photocopying. The challenges NOUN faces are however prompt availability of print form study material to students as some material take time to reach the students. This leads to various complaints from students ranging from study material availability to examination results that are sometimes not accurate, as seen from the complaint by a certain student on the student portal (Nigeria., 2016). According to (Dea Lerra, 2014) in the study conducted in Ethiopia established that some of the respondents pointed out they did not receive the necessary modules before the tutorial sessions, did not have the necessary modules for the semester and were forced to share modules on certain course. (Onyilagha and Nnajiofor, 2016) observe that the methods used in presenting those materials to learners in both the traditional classroom and distance educational systems may be different. If the presentation methods are appropriate for the desired system, then learning or knowledge outcomes would be enhanced. Instructional materials should be considered as part of communication, and should be used in a manner that is truly effective.

4.1.10 Students communicate easily with administration on issues related to their studies.

Table 4.9 students communicate easily with administration on issues related to their studies

	Frequency	Percent	Valid percent	Cumulative percent
SD	32	9.6	9.6	9.6
D	72	21.7	21.7	31.3
N	63	19.0	19.0	50.3
Valid	95	28.6	28.6	78.9
SA	69	20.8	20.8	99.7
35.00	1	.3	.3	100.0
Total	332	100.0	100.0	

Source: Primary data

Respondents were asked whether students communicate easily with administration on issues related to their studies, 32(9.6%) of the respondents strongly disagreed that students communicate easily with administration, 72(21.7%) disagreed with the above assertion that students communicate easily with administration, 63(19.0%) were found to be neutral in regard to the above subject matter, 95(28.6%)agreed that students easily communicate with administration, 69(20.8%) strongly agreed with the view that students communicate easily with administration on issues related to their studies. Research on educational and instructional effectiveness shows that teacher behavior patterns that have been found to relate to student outcomes includes clarity feedback, classroom management, and communications of teacher expectations (den Brok et al., 2004). This study, however, posits that these teacher behaviors are limited to instructional process within the educational institution.

Hitherto, the roles in this knowledge and innovation explosion era have changed. This, therefore, implies that teacher behaviors for effective teacher performance have to be redefined. Resistance to organizational change as organizations should change the way they provide services and do their work, the need for student to adapt. However, in most cases, Staff resists changes, and stick to old traditional methods, which makes the implementation of ICT as tools very difficult (Ugonna and Adetimirin, 2014). According to (Ndayambaje et al., 2013), 60% of surveyed students said that they only communicate physically with the tutors, peer and DTP administration in study centers, 56.6% testified to use also phone calls although handicapped sometimes by network and economic problems. For the DTP administrative staff, they reported to use written announcements, radio communication, office station and field trip when they intend to meet large group of trainees. (Dea Lerra, 2014) in the study conducted in Ethiopia established that the center coordinators are not properly trained to pay attention to problems like lack of information on tutorial time/ schedule, too far residence from the tutorial center, lack of time to study the materials in advance of tutorial sessions and absenteeism from tutorial sessions for unknown reasons. The personal observations of the researcher and FGD of distance learners also established the fact that coordinators and program organizers seem to have insufficient knowledge regarding allocation of time for tutorial sessions. This made work of tutors difficult as mentioned by the respondents. (Akmeşe et al., 2016) in their study established that 80.2% of the students who took part in study stated that they were not able to communicate adequately with the instructors in charge of distance education system, 46.3% of the respondents indicated that they got some help and 38.2% did not get adequate help.

4.1.11 Students easily access computer laboratories for their learning.

Table 4.10 students easily access computer labs for their learning

	Frequency	Percent	Valid percent	Cumulative percent
SD	36	10.8	10.8	10.8
D	71	21.4	21.4	32.2
N	59	17.8	17.8	50.0
Valid				
A	102	30.7	30.7	80.0
SA	64	19.3	19.3	100.0
Total	332	100.0	100.0	

Source: Primary data

Respondents were asked whether students easily access computer labs for their learning. 36(10.8%) strongly disagreed that students have easy access to computer labs, 71(21.4%) disagreed that students access easily the computer labs for their learning, 59(17.8%) of the respondents were found to be neutral about the subject matter, 102(30.7%) agreed that students easily accessed computer labs for their learning, 64(19.3%) strongly agreed that the students accessed computer labs for their learning. (Davis, 1989) asserts that PEOU refers to the degree at which the prospective user experts an e-learning system to be free of effort. Users of e-learning system should be comfortable using it with little or no effort or assistance.

Again, reducing the waiting time for learning materials to load may improve the quality of the system. Other researchers (Bhuasiri et al., 2012) ; (Islam, 2013b); (Motaghian et al., 2013); (Namisiko et al., 2014) using various TAMs hae postulated that on key technological determinant of e-learning adoption is the perceived ease of using the system. (Eze et al., 2013) in their study in Nigeria, which is another

developing country, discovered that the ICT infrastructure is a key component of every development in ICT including e-learning adoption. They further postulated that ICT assists socioeconomic development and promotes operational efficiency. (Mukama, 2016) observe that the student –to-computer ratio at University of Rwanda is almost double the UNESCO standard of 5:1. In Cameroon, (Ndongfack, 2016) found that reliable electricity poses a challenge to internet access, which is described as 'unstable and weak'. (Nyerere, 2016), citing the 2013 e-readiness survey of Kenyan universities, observed that while all universities in Kenya are connected to the national fibre backbone network, they are not making substantial investments in their own network infrastructure. As ODL and technology increasingly get interconnected, lack of electricity and internet will create a big challenge to adoption.

The interviewed directors of distance learning units of the surveyed universities mentioned the following as the major problems and challenges facing provision of digital and electronic library services to distance learners in their respective units

1. Course content is not available in electronic format i.e., lack of courseware.
2. Lack of information literacy programs for distance learners;
3. Lack of any form of library services specifically designed for distance learners;
4. Shortage of necessary funds to design and manage digital libraries
5. Lack of qualified library professionals who can design and manage digital library services.

In view of the statement it can be deduced that unnecessary delays are caused in terms of information dissemination as a result of absence of these facilities. He also narrated challenges encountered using internet with communication technology to facilitate communication with students. Some of these challenges cited include:

High bandwidth costs, limited access to the Internet and technology as majority of the students, especially those commuting from home/outside the state, do not have access to ICT facilities (Ugonna and Adetimirin, 2014). A fundamental issue when starting a computer lab is who will have control or responsibility over the lab. Many times volunteers are thrust into the position of either replacing or supporting a teacher whose first training is not in computers. It is common for schools to get computers without a computer teacher (Markon, 2013). The use of computers at regional campuses was rated 1 by 47% and 67% by WU and NU respectively. This is an indication that the majority of students rarely used the computers at the regional centres (Rangara, 2015). Technical support to academics is lacking in comparison to the desire of learning success and the profound use of e-learning technology. The great   desire is met with insufficient investment in infrastructure and technological assistance (Reeder et al., 2004). The study revealed that a majority of the students (34.3% Agreed; 22.2% strongly agreed) perceived insufficient exposure to computers and ICT technology as a challenge. The spread of ICT technology in Kenya is not very broad and it is possible that some of the students start interacting with this technology when they enroll for the programme. Majority of the students (31.4% agreed; 22.6% strongly agreed) that there was insufficient ICT training by the university. This is a challenge to the students because 90% of the learning in the ODeL programme is on the ICT platform with only about 10% reserved for on campus face-to-face tutorials (Mukirae et al., 2016). In a study of e-learning from the experiences of e-tutors, (Pitsoane et al., 2015) report that students are found to be illiterate on computer usage and some are shy to use online systems in a public platform such as e-tutoring. The finding reflects students' lack of confidence and expertise on the e-learning platform. Furthermore, the computer labs at the study centers belong to individual institutions, which are often equipped with mobile Internet, but there is no assurance that DE students are able to access the facility

(Aktaruzzaman, 2017). In university teaching and learning scenarios, (Selwyn, 2006) recalls that „the potential of computer technologies to revolutionize university teaching and learning has long been celebrated by education technologists". That being, provision and usage of ICTs (computers and Internet as per this study) are no longer a matter of choice but rather a must. In Uganda, a study carried out by (Kaahwa, 2013) proved that university students, teachers and head teachers needed new computers. In parallel to this, continuous training in ICT itself and how to use it in various subjects was highlighted as a key towards success. Educational institutions both in developed and developing countries are striving to equip themselves with computer and Internet facilities. The motivation behind is based on the belief that these institutions will benefit first from the use of these new technologies but also they feel concerned with the need to respond to the real fact that students have to be exposed to these gadgets right from the school environment (Osorio, 2009). According to Hollowell, 2012 cited (Kaahwa, 2013) computers and Internet make learning more fun, constitute viable and updated sources of information but even extend the knowledge application. Hence, they should be advocated and enforced as integral part of education systems rather than just supplement. (Ndayambaje, 2014) observe that the problem of access to computer and Internet facilities was again reported by students to be increased by the fact that only 11% have own laptops and a limited time is given to any student to access freely the existing computer labs because most of the times; the four Internet connected computer labs are used for computer teaching or practical works organized and supervised by lecturers. In the related study it was revealed by investigated students that not all computers in these labs are connected to Internet and sometimes the connectivity is not assured or speedy (Ndayambaje, 2014). Students complained too about insufficient time of access, irregularity and poor services of IT support staff. As support to their statements, two of the investigated students affirmed to have

brought their laptops to get keys for wireless connection and failed to get ICT staffs who were supposed to assist them (Ndayambaje, 2014). The ability to technically support and maintain the computer facilities was another aspect that impacted on collaborative e-learning adoption and use. The frequent technical problems meant that many students working on the few computers resulted in numerous failures. In addition, slow computers, frequent power outages and insufficient bandwidth to download relevant learning materials further frustrated the students (Kahiigi, 2013) . It is moderately clear that in developing countries, infrastructure penetration is so poor and inadequate. In most cases, these infrastructures such as electricity, telephone connectivity, internet highway and good roads are restricted to urban areas, because a large number of the population are in rural areas therefore have no access (Orom et al., 2012). According to (Friedrich, 2011) use of computers and internet seem to be evident that their full usage and enforcement as educational tool is still hard due to various factors including human, financial, administrative and institutional factors.   (Wanyaga et al., 2015,) in a study conducted in Kenya revealed that high cost of computer hardware, software and related accessories are barriers to implementing e-learning in schools. In another study by (Ngamau, 2013) established that individual computer literacy , organizational (management support, institutional leadership and institution wide e-learning strategy, ease of use of the system, and ICT infrastructure) and technology or system factors (ICT) infrastructure, perceived usefulness, output quality and job relevance) contributed to poor adoption of e-learning by university faculties. (Alamin, 2014) in a study conducted in *Sudan*, research results revealed that two categories of e-learning factors faced by learners; technical factors or the infrastructure of e-learning and social factors which causes the success and implementation of e-learning. (Namisiko et al., 2014) conducted a study on the challenges facing the private universities wishing to adopt e-learning and the findings revealed that major challenges of e-

141

learning factors are availability of ICT infrastructure, e-learning curriculum, instructor competencies, performance expectancy, perceived usefulness of e-learning by learners and perceived ease of use of e-learning by learners. (Dubicki, 2010) submitted that students are often confused and get frustrated despite the convenience they have to access the internet. (Williams, 2008) argued that this is likely due to students' lack of knowledge and incompetency in evaluating information available on the internet for relevancy, accuracy and authority. (Lahlafi et al., 2012) asserts that all these contentions only reinforce the fact that despite having access to the internet, students still need guidance to improve on their information-seeking skills. According to (Vighnarajah and Santhiram, 2014) observed that poor information search also causes students most especially distance learners , to feel a sense of isolation from the learning process, and even from the university experience in general. It is from this key important aspect that library has to cultivate effective information seeking behavior among students, library has acknowledged this and initiated complex information systems, among others, online repositories, e-resources, and electronic information sources (Head, 2013): (Kadli, 2013b): (Kumar, 2013).

4.1.12 Students have capacity to own personal computers

Table 4.11 Students have capacity to own personal computers

	Frequency	Percent	Valid percent	Cumulative percent
SD	68	20.5	20.5	20.5
D	88	26.5	26.5	47.0
N	67	20.2	20.2	67.2
Valid				86.4
A	64	19.3	29.3	100.0
SA	45	13.6	13.6	
Total	332	100.0	100.0	

Source: primary data.

Respondents were asked whether they have capacity to own personal computers, 68(20.5%) strongly disagreed with the above assertion, 88(26.5%) disagreed that students have capacity to own personal computers,67(20.2%) showed their neutrality on the assertion, 64(19.3%) agreed that students have capacity to own personal computers, 45(13.6%) strongly agreed that students have capacity to own personal computers. The availability of personal computers/desktops/laptops is essential for the effective utilization of e-learning since this mode of pedagogy is computer-based.

However, this challenge was ranked sixth among the eight challenges impending the adoption and utilization of e-learning in public universities. This was because only slightly more than a quarter of the lecturers (29%) did not own personal computers or laptops. Many distance educators in developing countries argue that the major problem inhibiting wide spread application of online technology is simply the lack of computers. But the issue is a bit more complicated than this gap alone. In addition,

there is complication of intermittent electricity supply in many regions, and even throughout entire nations. There is the matter of networking computers to enable cohorts of learners to interact with one another and with instructors. There is also speed of computers. According to findings of the study done by (Rangara, 2015) indicates that there were high percentages of respondents who did not own computers. 86% of students at WU did not own a computer or a laptop while NU recorded 93% on the same. According to (Fadl el moula and Yassin, 2017) in their survey at Gezira University observed that there were insufficient availability of computers for instructors as well as students during the working hours. The university should provide a computer lab equipped with sufficient number of computers and connected with fast internet. In developing countries, most of students and instructors will not acquire their own computer. Difficulty in access to computer will negatively affected the acceptance of technology and its use. Institutions have a variety of applications and computer operating systems for various uses such as the student registration system, and research support applications such as NVIVO and SPSS. All these applications have to be merged and linked within one e-learning environment to make it accessible and enable central support; however, this requires the merging and linking of various applications. This creates increased network traffic to support the centralized infrastructure, thus it should be robust and have enough capacity and capability to handle student academic communication. This is a complex process especially where old and new applications meet, and is a challenging process effecting academics who have to use the system (Nielsen et al., 2011).

Most respondents showed that they had challenges in working with information and communication technologies. The study indicated that , seventy percent (70%) of the respondents had no computer and 55% were computer illiterate. The implication

is that most of these students could not access information on the Internet. The use of electronic media is therefore likely to exclude the majority of distance learners (Musingafi et al., 2015b) . This concurs with several other studies in developing countries that established that ODL students in developing countries are challenged with both lack of experience in the application of technology and absence of these technologies (UNESCO, 2004); Mbukusa, 2009; (Basaza et al., 2010). A majority of students (31.4% -Agreed; 22.6%- Strongly Agreed) also noted lack of finances to buy ICT gadgets as another technical challenge by the students. Although the students are issued with Tablets by the university on enrolment which are charged on their fees, they at times require replacement due to loss or damage. Financial constraints may force a student to stay without the gadget during which time his/her learning is paralyzed which undermines the effectiveness of the learning process (Mukirae et al., 2016). In some other findings the students are found to be not digitally literate to use the tools and may never be able to use them for learning in future because of their habits (Ngubane–Mokiwa and Letseka, 2015). According to Kashorda and Waema (2014), the ratio of students with personal computers per 100 students was 3:8. This is considered quite low indicating a challenge in delivering ODL. It was also noted that only 16,174 student lab computers were available for 423,664 students at the 30 universities surveyed by E-Readiness Survey in Kenya; and only 17% of students accessed computers from their campuses. In addition, the imbalance created by access to computers between the rural and urban communities has greatly impacted on the advancement of e-learning in the developing country context. Although there is access to computer and Internet facilities to some extent in the urban areas, the rural poor populations, who have a genuine need for development, are still deprived of such facilities (Kahiigi, 2013). (Millham, 2014) in the study conducted in South Africa established that some of the learners have

never used laptops for the e-learning purposes, took some time for them to adjust with the computer.

4.1.13 Internet is readily available for students on distance learning for their ICT related programs.

Table 4.12 internet is readily available for students on distance learning for their ICT related programs

	Frequency	Percent	Valid percent	Cumulative percent
SD	49	14.8	14.8	14.8
D	81	24.4	24.4	39.3
N	65	19.6	19.6	58.9
Valid			21.5	80.4
A	71	21.4	19.6	100.0
SA	65	19.6	100.0	
Total	331	99.7		
Missing system	1	.3		
Total	332	100.0		

Source: Primary data

49(14.8%) strongly disagreed with the assertion of availability of internet for students, 81(24.5%) disagreed with the statement that internet was readily available for students on distance learning for their ICT related programs, 65(19.6%) showed a neutral for position on the statement, 71(21.5%) agreed with the statement that internet was readily available, 65(19.6%) strongly agreed with the above statement that internet was readily available for distance learning programs. Insufficient internet connectivity is one of the major problems affecting the adoption of e-learning by both students and lecturers. In a survey report by (Farrell, 2007) based

on 2003 data revealed that Uganda had only 106 of its 13,353 primary and 207 secondary schools connected to internet. The report further noted that more specific factors constraining connectivity in rural areas are the overall poor communication infrastructure, low electricity coverage and high costs involved in the construction of computer laboratories (Farrell, 2007). According to (Jessica and Fraser, 2006) in a survey among students registered at Makerere university in distance learning program concluded that while there is high usage of ICT, student access to the infrastructure was a major barrier. This agrees with (Farrell., 2007) who observed that many schools have computers as a result of efforts put in by institutions, NGOs, religious organizations, and international donors, still a few are connected to the internet, Bandwidth refers the speed of connection and access to internet and its services. Bandwidth has remained a big challenge that hampers growth of e-learning and access to it (Kasse et al., 2015). As far as Internet availability is concerned, (Kasse et al., 2015) further noted that the national fiber network efforts have remained in towns or in central business districts without extension to remote areas where most institutions have campuses or annexes. Lack of internet connectivity was cited as a challenge by a majority of the students (31.4%-Agreed; 26.6% Strongly Agreed). The ODeL students are spread throughout the country and for some, especially those in remote rural areas, internet connectivity could be quite a challenge. A majority of Kenyans in the rural areas rely on wireless internet from cellular phone service providers due to lack of wire connectivity. This poses two challenges: one, in some places the signal is quite poor or nonexistent, and; two, the cost of internet via cellular phone is quite high. A combination of these two poses a serious challenge to students who are at times forced to travel from their workstation to local townships to seek for internet services from cyber Cafes (Mukirae et al., 2016). Moreover, (Mbatha and Manana, 2012.) are of the same view that access may be an issue for first-generation and low-income students and those from rural areas

where low-speed Internet connections prevent them from using websites adequately. Possibilities of sharing someone's computer may raise issues of privacy while those of travelling to areas where Computers are available could be financially challenging. The E-Readiness Survey (2013) Report, however, pointed out that although all universities are inter-connected to the national fiber backbone network, universities are not investing sufficiently in their internal campus backbone and wireless network infrastructure that will make it easier for students to use their own laptops and smart phones on campus to access learning materials and other student services. (Ndayambaje, 2014) established from the study that only 30% of the respondents agreed that they have continuous access to Internet which means that 70 % don't or rarely access Internet. These views show that really lecturers do not maximally exploit the benefits that Internet holds for education which might be impeding on their academic life and related duties. (Juma, 2008,) observed that although Africa has only one percent of the world average of bandwidth per capita, most of African institutions can only afford an average of 1.554 Mbps (megabits per second), which is very low as a matter of fact for even a small university given its users (Singh, 2014) .According to Steiner et al. (2005) as cited in (Alemneh, 2006), 2004 African Tertiary Institutions Connectivity survey (ATICS) collected information from 83 institutions of 40 Africa countries and the results indicated that internet connectivity by three characteristics that is too little, too expensive, and poorly managed. (Mayoka et al., 2014) in the study conducted in Uganda at some selected universities established that the major factors affecting e-learning included; lack of knowledge, lack of resources and staff failure to adapt to new teaching technologies. (Ugonna and Adetimirin, 2014) in the study conducted, deduced that unnecessary delays are caused in terms of information dissemination as a result of absence of facilities. Some of the challenges identified include; high bandwidth costs, limited access to internet and technology as majority of the students, especially

those commuting from home/outside the state, do not have access to ICT facilities. From findings in the study, (Ayo et al., 2014) revealed that there are critical challenges in the current ODE practices in Nigeria. Some of the identified challenges include; poor electricity, poor ODE learning infrastructure, especially those relating to ICT, poor teaching and learning methods, few qualified lecturers and poverty among others. These challenges have strong limitations on proper implementation of the programs (Akmeşe et al., 2016) in their survey, the results revealed that about 15% of the students indicated that they would not use DE system since they did not use internet and 42 % considered DE as ineffective. As a result of the survey analysis, about 15 percent of the students stated that they cannot use the distance education system because they do not use the internet and it was also found that 31% of the students, in total, do not use HUZEM system. 42 % of the students indicated that distance education system was ineffective. 38% of the students pointed out that both the distance and the formal education should be used together.

Technology in the classroom is changing the ways lessons are prepared and delivered. No doubt, technology will continue to be increasingly relevant in schools and classrooms. Hence, today's learners (often referred to as "millennial") can be described as belonging to digital communities with easy access to computers for research, learning, Internet browsing, video game playing, and instant messaging. They are connected or networked through hand held cellular devices and are accustomed to fast-paced information presented in a manner that requires multitasked responses (Onyilagha and Nnajiofor, 2016).

4.1.14 Internet is affordable and accessed by students on distance learning.

Table 4.13 internet is affordable and accessed by Students on distance learning

	Frequency	Percent	Valid percent	Cumulative percent
SD	44	13.3	13.3	13.3
D	79	23.8	23.9	37.2
N	65	19.6	19.6	56.8
Valid				
A	88	26.5	26.6	83.4
SA	55	16.6	16.6	100.0
Total	331	99.7	100.0	
Missing system	1	.3		
Total	332	100.0		

Source: Primary data

44(13.3%) strongly agreed that internet is affordable and accessed by students, 79(23.9%) disagreed with the statement of affordability and accessibility of internet to students, 65(19.6%) indicated a neutral position on the assertion, 88(26.6%) agreed with the statement that internet was affordable and accessed by students, 55(16.6%) strongly agreed with the above assertion of affordability and accessibility of internet for students on distance learning. Also, (Anckar and Walden, 2001) identified the lack of financial resources as one of the four most important barriers inhibiting organization from fully capitalizing on ICT. Additionally, (Bourgouin, 2002) viewed available financial resources as one of the determinants of ICT implementation. He intimates that, owing to the high price of equipment and few resources, organizations are limited in their use of ICTs. These lacunas are further

exacerbated by prohibitively expensive bandwidth which, by some estimates, can cost four to ten times as much as typical rates in the USA and Europe (Mills, 2004).

In developed regions such as North America and Europe, ODL programs are delivered fully via ICTs such as Learning Management Systems (LMSs), video conferencing, Face book, immersion in Second Life among others. However, this is not yet possible in Africa due to several challenges such as lack of high-speed Internet infrastructure, access to computers, and human resources with the required expertise to effectively implement and support hi-tech delivery methods (Aderinoye et al., 2009): online journal. Additionally, bandwidth is not evenly spread across regions in Uganda; some areas have fiber access whereas others remain on data dongos (Kasse et al., 2015).

Universities are continuously adopting new technologies leaving the student bewildered as to their focus; learning or technology training. The internet has 'everything,' open course ware (OCW), open education resources (OERs), wikis and all web information. Students cannot simply find things for themselves. Furthermore, distance learning has no policy on how to engage with the internet, and students are left to decide what, which and how much is required for any level of study (Rangara, 2015). (Sife et al., 2007) reported that, infrastructure for ICT development was considered as a serious challenge affecting the adoption of e-learning in higher education, mainly in developing countries. The study conducted at Open University of Tanzania found low level of internet connectivity and insufficient number of computers as factors affecting the adoption of e-learning. Majority of interviewed students (65%) said that they did not use e-learning. Their explanation was that if their lecturers did not use it, they too could not use it. Occasionally, they downloaded notes from the LMS in a process they described as difficult and slow because of poor internet connectivity. Like their lecturers, many

students preferred lecture notes, handouts, or modules in hard copy form because of the following reasons:

- Lack of computers and laptops to access soft copies especially during weekends and evenings;
- Poor Internet accessibility and connectivity especially outside the university premises;
- Expenses involved in Internet connectivity; and Convenience of reading hard copies anywhere, anytime (Makokha and Mutisya, 2016).

It was evident from the discussions that some ICT resources are in place but not utilized due to insufficient human resources or inappropriateness in terms of student needs and the context. This suggests the need for examining both short-term and long-term policy development regarding ICT procurement, its integration with delivery methods, e-content repository and training and support systems at different levels for BOU staff (Aktaruzzaman, 2017) . Most higher education institutions in developing country contexts, however, still follow the traditional instruction approach owing to the lack of supporting ICT infrastructure, resources, and skills, mindset challenges (Kahiigi, 2013) . Attempts to enhance and reform the education sector through the integration of e-learning in developing country contexts have been negatively affected by unreliable and inadequate ICT infrastructure and resources. Most areas in this context are without a reliable supply of electricity and the nearest Internet points of presence are not readily accessible. Individuals have to travel long distances to access Internet services (Kahiigi, 2013) . Limited bandwidth and its high costs have had a negative impact on the advancement and utilization of e-learning in developing country contexts. The recurrent high bandwidth cost and slow connection restrict usage (Kahiigi, 2013) . According to (Oroma et al., 2012) , access to these technologies is determined by whether or not one is able to afford. Since

most people are basically low and average income earners, they are not favoured to gain access and use these tools because of its exorbitantly high prices. For example, in Uganda, to access and use internet at a public internet café is about shillings 2000 (2450shs= USD 1). Cost is another important consideration in the ODL adoption process. (De Wet, 2016) , argue that DE infrastructure needs reasonable amount of investment and commitment by government and university to invest in information and communication technology (ICT). (Minnaar, 2013) observed that on-line teaching and learning may reduce the costs over time, however, there are upfront investments and initial capital needs that have to be planned and budgeted (Millham, 2014) in the study conducted in South Africa established that learners face challenges which were highlighted as internet outages, laptop problems, and login issues. (Mawere, 2011) in the study conducted in Mozambique revealed that e-learning barriers included, abject poverty, weak and erratic power supply, underdeveloped ICTs architecture and cultural barriers within the educational institutions. (Kasse and Balunywa, 2013) as cited in the e-learning African report of 2012 noted that some of the most important constraint factors are limited bandwidth, lack of financial resources, inadequate human resource capacity, and the limited electricity. (Mawere, 2011) argued that Africa suffers a typical infrastructure problems, including, insufficient computers and funds, proper development of curricula for teaching e-learning skills and lack of teachers trained in terms of integrating e-learning in their teaching. In a study by (Zhu, 2015) conducted at two universities, Uganda and Tanzania established that lack of capacities for institutional policies, teachers' competencies and internal investment are important weakness and threats for the universities. (Loh, 2013) argues "that students have the confidence of the information skills, they are able to fulfill simple surface information needs, search information to answer simple questions that exhibits only surface e-learning. However, they are unable to dig deep into concepts. In a survey to determine the

status of technology education in the United States, researchers concluded that technology literate populace and continuous dissemination and implementation of standards in technology and advancing excellence in technological literacy are imperative (William, 2007). While some stakeholders are apprehensive of the impact of technology integration in classroom (Cummings, 1996), many educators insist on enhancing learning with technology (Hoffner, 2007).

4.1.15 Requirements for Registration is Prohibitive for students.

Table 4.14 requirements for registration are prohibitive for students

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	60	18.1	18.1	18.1
	D	69	20.8	20.8	38.9
	N	87	26.2	26.2	65.1
Valid					
	A	76	22.9	22.9	88.0
	SA	40	12.0	12.0	100.0
	Total	332	100.0	100.0	

Source: Primary data

60(18.1%) strongly disagreed with the above assertion, 69(20.8%) disagreed with the statement regarding the registration requirements being prohibitive for students, 87(26.2%) were found to be neutral with the statement, 76(22.9%) agreed with the statement that the requirements for registration were prohibitive, 40(12.0%) strongly agreed with the assertion that requirements for registration were prohibitive for

students. According to the guidelines for central registration of fresh students semester I 2015/2016

All fresh students should strictly adhere to the following registration guidelines and timelines:

1. Read and internalize these guidelines to prepare yourself for the registration exercise.

2. Go to Kyambogo University Computer Centre/ICT Coordination Office to verify your information online, create password to your Student Portal Account and obtain a payment reference number.

3. Pay, using reference number, the Kyambogo University mandatory fees in Stanbic, Crane or Eco bank anywhere across the country by 21st September 2015.

4. A surcharge will become effective at Midnight of 21st September 2015 for students who will not have cleared all the mandatory fees.

5. Pay National Council of Higher Education (NCHE) fee using deposit slips available in Stanbic Bank (No need for payment reference number to pay NCHE fees).

6. Go to the Reception of Admissions Office, Block 2 and collect 2 copies of Registration Forms and File Folder starting on 7th September 2015.

7. Fill the registration forms and attach passport photos and photocopies of the following documents on each of the two forms in the order they are listed below: Go to Room 1, Admissions Division, Block 2 from Wednesday 7th September 2015 with your admission letter, fees payment slips and registration forms to have your photo taken.

a) Admission letter.

b) Uganda Certificate of Education (0-Level) or equivalent result slip and certificate.

c) Uganda Advanced Certificate of Education (A-Level) or equivalent result slip and certificate.

d) Diploma transcript and certificate (For Certificate/Diploma scheme entrants only).

e) Identity card from previous schools/institutions.

f) Passport (For International students only).

g) Birth certificate.

h) UNBCR Refugee Pass (For refugee students only).

i) National Council of Higher Education fees slip.

j) Bank payment slip for tuition and functional fees.

8. Present yourself for registration at Block 2-Admissions Office in any of the Rooms 2,3, 4 or 16 from 7th September, 2014 with originals of all the documents listed in 6 above, completed registration forms.

9. In cases where the system fails to recognize that you have made payments and therefore cannot register you, go to ICT Coordination Office, at the Faculty of Arts and Social Sciences to have the problem rectified.

10. After verification of your admission, payment and academic documents, go to Room 3, Admissions Division to sign the registration list and be issued with a registration card. Leave a copy of the registration form in the file folder in Room 3.

11. Report any error on your registration card immediately to Admissions Office, Room 4.

12. Deliver the 2nd copy of the registration form to your Hall of Attachment/Residence and sign up.

<u>Important:</u>

a) Only admitted and fully paid up persons will be registered.

b) Only candidates who present mandatory documents in 6 above will be registered.

c) 2013 and 2014 candidates do not need to have UACE certificates to be registered.

d) Students who lost their result slips or certificates must have letter of verification of results from UNEB. Please request for the letter from UNEB early enough.

e) Always monitor your student OçOs portal account using your student number and password.

f) Keep your original documents in secure and safe places at all times.

g) Ensure that you register and receive registration card before examination period begins.

h) No student will be registered and/or issued registration card during and after examinations.

i) Applicants are strongly warned against presenting forged academic documents for registration. The consequences, if discovered, are very grave.

Institutional barriers are those barriers caused by organizational set-up. These barriers may be both physical and non-physical.

The physical barriers may include such things as nearness to classroom, road net-work and other academic resources such as the library. Stringent admission requirements, high tuition fees and the mode of paying these fees constitute some of the non-physical barriers. Other barriers, which come under this category, are non-interesting courses, inadequate text-books, poor library facilities and poor organization of class and examination (Cross, 1981).

Students of DE comprise a wide and heterogeneous population whose needs vary. Providing support for populations who differ in environmental experiences, academic experiences, age, gender, social constraints, economic needs and numerous other variables may not be easy. Yet, support in DE is such a basic and important need for most students. (UNISA, 2010) explains that it is important to profile each student at the onset of the program so as to gain an understanding of the student's needs. This optimizes the student's entry into the program by accessing relevant support and experiencing a smooth transit into the learning community. The task team further explain that if the student's needs are successfully addressed at the onset of the program it becomes easier for the student to gain confidence in the system and be successful in learning activities (Rangara, 2015).

According to findings of the study by (Rangara, 2015) revealed that in the registration index, 82% of respondents at WU were pleased with the University's support during registration compared to 92% of those at NU, giving a difference of 10% between universities. The results show slight differences in the students' ratings of support services during registration processes. Both universities seemed to have provided sufficient registration information to students with scores of over 90%. Understanding the registration process had the highest indication that students encountered some problems in this index. Here, up to 20% of students in WU rated 1 while in NU the same was rated by less than 5% of the students. In receiving guidance to the registration process, students from both universities indicated equivalence at about 80% for combined score.

4.1.16 Students adhere to the rules and regulations governing the program.

Table 4.15 students adhere to the rules and regulations governing the program.

.		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	10	3.0	3.0	3.0
	D	25	7.5	7.5	10.5
	N	41	12.3	12.3	22.9
	A	137	41.3	41.3	64.5
	SA	119	35.8	35.8	100.0
	Total	332	100.0	100.0	

Source: Primary data

10(3.0%) strongly disagreed that students adhere to the rules and regulations governing the program, 25(7.5%) disagreed with the above assertion, 41(12.3%) were found to be neutral with the statement, 137(41.3%) agreed that students adhere to the rules and regulations governing the program, 119(35.8%) strongly agreed that students adhere to the rule and regulations governing the program.

Students and Student Services receive clear, complete, and timely information on the curriculum, course and degree requirements, nature of faculty/student interaction, assumptions about technological competence and skills, technical equipment requirements, availability of academic support services and financial aid resources, and costs and payment policies.

Enrolled students have reasonable and adequate access to the range of student services appropriate to support their learning and assess their progress.

Students have the background, knowledge, and technical skills needed to successfully use the technology involved in their course work.

Advertising, recruiting, and admissions materials clearly and accurately represent the courses and programs, and the services available.

4.1.17 Staff in distance learning program are trained and given technical skills of the program.

Table 4.16 staff in distance learning program are trained and given technical skills on the program.

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	8	7.3	7.3	7.3
	D	32	29.4	29.4	36.7
	N	11	10.1	10.1	46.8
Valid					
	A	35	32.1	32.1	78.9
	SA	23	21.1	21.1	100.0
	Total	109	100.0	100.0	

Source: Primary data

Staff were asked whether those involved in distance learning program are trained and given technical skills of the program; 8(7.3%) strongly disagreed with the statement, 32(29.4%) disagreed that staffs that were involved in the program were trained and given the technical skills of the program, 11(10.1%) were found to be neutral with the statement, 35(32.1%) agreed that staffs who are involved in the

distance learning program are given technical skills of the program, 23(21.1%) strongly agreed with the statement that staffs received technical skills in distance learning programs. Using the TPACK framework, teachers need knowledge of technology as it relates to both pedagogies and content. From an instructional design perspective (Gustafson and Branch, 2002), content-based learning objectives should precede any consideration of technology. In an effort to contribute towards addressing the gap of lacking University teaching staff with innovation competence in Ugandan universities, (Kasule et al., 2014) advance five innovation competence domains and 14 underlying skills that teaching staff in universities need in order to perform their present and future university tasks. The domains are as follows: innovating; knowledge society facilitating; collaboration and networking; higher education designing and developing; and entrepreneurship. In addition, universities are expected to equip students with innovation knowledge and skills so as to be productive at the place of work and in life in general (Kibwika, 2006). An example of a poor lab manager can illustrate this point. At a nearby school the lab was arranged poorly and not conducive for students to work on the computers (Markon, 2013). According to (Fadl elmoula and Yassin, 2017) the findings indicated that 85.5% of the respondents felt that their skills in computer was quite enough to use and operate a computer, however, 65.0% of them said that their skills in e-learning applications is not enough. Moreover, 62.7% of the respondents said they did not receive any training in e-learning tools. From the above statistics it is important for emphasis to be put on staff training in most of the Universities engaged in Distance learning in Africa and Uganda in particular. Technology needs to improve; however, the instructor's characteristics and familiarity with technology are most important in terms of having a successful learning experience. Teachers who are motivated and have an encouraging attitude towards the e-learning technology will enable a positive learning outcome (Nurul et al., 2015) . They also

state that the instructor must have the ability to motivate students, show empathy, resolve emergency problems and respond to emails rapidly. A positive attitude to e-learning depends on how confident they feel about the technology; if one of the requirements is the ability to troubleshoot basic problems in the e-learning system, then academics in the UK would potentially not feel confident as they are not trained to troubleshoot, nor change passwords or course settings never mind resolve emergency technical problems. Therefore providing adequate training would help academics do their job effectively whether this relates to managing online discussion forums, or identifying pedagogical needs amongst students (Nurul et al., 2015). Training is vital to academics how to utilise pedagogy in the e-learning environment, how do they adapt learning style in their material, correctly using the e-learning features are important, if academics do not know then investment will not yield the expected result (Nurul et al., 2015) . (Bigatel and Williams, 2015) explored the environment where students rate professionally trained online instructors against those who have not received any training. The findings revealed that teachers with professional development rated higher than those without professional development. Professionally trained teachers were able to apply strategies that can effectively engage their students. More students who had teachers who went through professional development felt that their courses engaged them, because their teachers participated online and provided feedback on assignments or on discussion posts (Mogahed, 2017). This suggests the need for effective guidance, support, and training for teachers in integrating computer technology resources. The prominent factors that influence the use of computer technology resources are the provision of efficient and effective training support and more systematic incorporation of technology resources into the curriculum. Training should not be limited to how to use computer technology; it should show teachers how they can make use of technology in improving the quality and effectiveness of their

instruction. Tutor roles and training needs also play an important role in providing quality DE, particularly in developing countries. Although BOU is the standalone DE provider in Bangladesh, it basically employs general education teachers from affiliated high schools and colleges to teach DE students on weekends, after completing a heavy workload in their own respective institutions during the week. This was reflected in the comments of informed public member, Anwar, who completed a Bachelor degree from BOU, "The teacher-tutors are usually busy for the whole week for their traditional classes …. So we cannot expect maximum support from them (Aktaruzzaman, 2017). Students and lecturers need to have basic ICT skills to work effectively in e-learning environments. Given the limited number of computers used by numerous students with varying ICT skills there are bound to be failures; frequent power fluctuations also affect computers and there is a need for skilled technical staff to support the available ICT infrastructure (Kahiigi, 2013). Instructors may be responsible for preparing and planning materials. Often proper training and support has not been provided to the instructors who are transitioning (Kyei-Blankson and Keengwe, 2011). In addition to lack of training and support, instructors lack incentives in designing (Allen, 2010). Majority of instructors teach with pre-defined content. In this, instructors face the issue of lack of empowerment (Evrim et al., 2011). Since the technology profession in general is relatively a new field in developing countries, the level of skills and knowledge in these areas are insufficient to a large number of people. The users of these technologies such as teachers, administrators and students all have significantly low levels of skills that do not favour the appropriate use of these technologies in education. Especially the teachers needed training on how to use the new teaching platform and the students needed to be oriented on how to learn and access learning materials from the new system (Oroma et al., 2012). An organization's absorptive capacity, defined as the

'capacity to utilise innovative and existing knowledge is positively associated with adoption (Wisdom et al., 2014).

(Mukama, 2016) argue that lack of staff expertise in ODeL to develop materials and carry out research for school of ODL affects the implementation of programs. (Nyerere, 2016) observed that while staff received some training, most respondents still expressed the need for capacity building. The lack of absorptive capacity is closely related to training readiness and efforts, which are associated with pre-adoption and adoption (Wisdom et al., 2014). If institutions do not adequately prepare for the adoption of the innovation through staff training, the organization's productive capacity will be low. According to the findings by (Ko, 2004): (Taylor, 2008)) established that knowledge, skills and competence of staff is crucial to the successful adoption of an innovation within an organization. Instructors need to up-to-date resources and training to be able to translate their teaching from traditional classrooms to the online environment. (Almala, 2006): (Wolf, 2006) assert that such quality training programs can increase acceptance of DL courses amongst instructors . (Mukama, 2016) in a baseline survey observed that there was need for more expertise in ODL among staff at University Rwanda' school of ODL and other faculty. Staff capacity may also affect staff perceptions of ODL. ODL may be considered to be too difficult, complicated or time consuming because staffs are not adequately given the required skills. Teachers may need to acquire knowledge and skills in handling information and communication techniques for e-learning courses. According to a study conducted by (Amenyedzi et al., 2011) in Ghana revealed that although there has been a limited use of computers by teachers in teaching, respondents acknowledged that computers have brought change in the way students learn. In a study conducted by (Kaahwa, 2013), in Uganda revealed that university students, teachers and heads needed new computers. It was noted that continuous

training in ICT and how to use it in various subjects was considered as key towards success. (Levinsen, 2007) indicated that instructors may need to have some form of training in communication skills, because it has a strong effect on e-learning courses. Communication skills play an important role in adapting e-learning skills the instructor has to diversify his communication skills, from being only a provider of information to also a facilitator of learning. In order to provide a quality experience in e-learning courses, instructors may need training sessions to improve their skills and online communication. (Levinsen, 2007) argued that proper supervision for instructors who are beginning to use an e-learning course will possibly increase instructor skills, while prioritizing instructors' needs for technical support will speed instructors' familiarity with the use of technical tools. (Georgina, 2009) assert that skills, communication, and technology are three related domains that instructors need to adopt in order to conduct a good quality e-learning course. (Kirkwood, 2009, Kirschner, 2004) argue that, despite rapid growth in ICT access by teachers and students both at home and school, and great improvement in ICT infrastructure (connection to internet, computer labs, availability of educational software, etc) most teachers are not taking keen interest in adopting and using ICT tools during teaching and learning. According (Laaria, 2013) the major challenge affecting developing countries regarding adoption and use of ICT is that there is no enough staff, and where they are most likely IT professionals without any education experiences skills, and or qualifications. Teachers play a critical role in implementation and use of ICT as they are at the centre of curriculum implementation and innovation at school level. There is a challenge of shortage of ICT teachers and other IT professionals that support adoption and use of ICT in the classroom. Schools continue to lose well trained ICT teachers to the private sector which seems to offer a higher pay in terms of salaries (GOK, 2010). (Ayere et al., 2010) in a study on E-learning in secondary Schools in Kenya, reported that a number of teachers had not received any training

165

in ICT use during their formative years at teacher training institutions before joining the profession. 55% of the teachers involved in the study indicated that they did not receive any training at all in ICT. (Keengwe, 2011) observe that teachers' adequacy, skills, and attitudes influence successful implementation of ICT in schools. If teachers' perceptions are positive towards use of ICT, then they easily provide useful insight about implementation. According to (Laaria, 2013) the findings indicated that majority of respondents (82.27%) indicated that there was limited supply of qualified teachers which is a barrier to implementation of ICT programs. (Kandiri, 2012) argue that many authors have shown that vast majority of teachers, in both secondary and primary schools have no skills and competencies to facilitate the ICT implementation programs in schools. In *Egypt*, (Abdelaziz et al., 2011) conducted a study in Egypt on the effect of using e-learning versus traditional lectures at Ain Shams University and the findings revealed that lack of computer skills affected learners' ability to communicate effectively with instructors. Lorenzi and Riley (2000) as cited (El Gamal and Abd El Aziz, 2011) established that lack of knowledge and skills, and the negative attitudes towards use of e-learning are factors that affect faculty members who resist use of e-learning materials in the university teaching. (Ugonna and Adetimirin, 2014) in an oral interview with the IT staff, who took part in the study indicated that there was inadequate infrastructural facilities, slow human capital development, finance and a host of other factors that contribute to poor facilitation of study, teaching and learning process in terms of information dissemination, record keeping, poor quality and design of course materials, and general administration. "They sometimes fail to get the necessary information about studies such as; deadlines for submission of term papers, meetings with facilitators, poor student's record keeping, etc. (Ugonna and Adetimirin, 2014) observed that computer literacy is also a factor as many organizations have computer systems in offices, but they are not used by staff due to their inability to use them. Lack of

knowledge and information management competencies, there is very little that a person can do without knowledge (or know-how). Knowledge is power, and staff member with little or no knowledge (of ICT) will never perform as well as someone who knows about ICT. (Mamdan, 2012) observed that the rise in student admissions has doubled but the teaching staff and physical facilities have not caught up with the pace, there are no more tutorials, research work is not adequately supervised, community services are scanty and almost all activities have been monetized. (Palloff, 1999) observed that current research studies should encourage administrators to explore ways to orient and educate new and existing faculty members to online learning environment . Administrators need to investigate creative ways to promote relevant staff development plans that meet the needs of today's graduate educators. Instructors have varying experiences, therefore interactivity skills must be supported and encouraged through formal and informal professional development.

4.1.18 Distance learning has separate structure as far as its management and running is concerned

Table 4.17 distance learning has separate structure as far as its management and running is concerned.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	19	17.4	17.4	17.4
	D	29	26.6	26.6	44.0
	N	12	11.0	11.0	55.0
	A	29	26.6	26.6	81.7
	SA	20	18.3	18.3	100.0
	Total	109	100.0	100.0	

Source: Primary data

Respondents were asked whether distance learning had separate structures in terms of management, 19(17.4%) strongly disagreed with the above assertion, 29(26.6%) disagreed that distance learning program has separate structure for its management, 12(11.0%) were found to be neutral on the above statement, 29(26.6%) agreed that distance learning has separate structures in terms of its management, 20(18.3%) strongly agreed with the above assertion of having a separate management structure for distance learning programs. The findings of this study are in agreement with most externally initiated studies of education in Africa undertaken during the early 1990s and up to now, that African education faces severe challenges (Samoff, 2003); (Sewyerr, 2004); (brief., 2010); (Van Deuren, 2013), for example, irrelevant

curriculum, shortage of Journal of Higher Education Policy and Management competent staff, poor management and inefficient administration, dilapidated infrastructure, and very high teacher—student ratios .The first and major challenge to orderly growth of the domain of ODL in Africa is absence of national ODL policies; while many ODL outfits spring up and while governments authorize and do license conventional and non-conventional tertiary institutions to dispense ODL programs and courses, there are no national policies clearly delineating a path for ODL to run on. Where government directives (policy incubation) have been issued for either conventional or non-conventional institutions to run ODL courses, the very operationalization of those programs end up being muffled and contrived by the un enlightened actions of the of regulatory agencies.

For example, (Barasa, 2010) submits:

Most open universities are trapped in residential national education policy environments. National regulatory agencies prescribe the minimum entry academic qualifications that learners must possess in order to be admitted into degree programs. This closes the window on openness as to admission and undermines the very philosophy upon which ODL is predicated. For dual mode universities, institutional policies for staff recruitment, training and promotion are often modeled on and similar to those in residential face-to-face universities. The result is that emphasis is on research with little or no evidence for effective teaching and learner support as criteria for promotion (Barasa, 2010). (Mukama et al., 2013)) pointed out that there is organization related clash of priorities between ODL and face-to- face programs. The school of ODL does not have its own academic staff working within the school to develop programs and learning materials. The school depends on other staff from other departments in delivering the DL programs in relation to their expertise. This gives the chance to the staff to attend to their mother department first

and DL programs are not attended too as required. (Mukama, 2018) obseverved that it is more likely that without a strong ODL institution, most initiatives will remain sporadic despite a number of interventions. ODL requires different regulatory frameworks, management and administrative processes. For example, ODL students may register by module throughout the year, rather than annually as in conventional programmes. Furthermore, ODL requires different student support systems and the students work to a different timetable. This is why this study highlights the need to set up an appropriate ODL institutional framework and a strong coordination mechanism for ODL initiatives, in order to match ODL governing techniques and implementing strategies with the government's aspirations. (Mukama, 2018) asserts that in terms of organizational capacity, the document states a clear requirement of infrastructure, for example, ''DL unit must have dedicated offices to efficiently host academic, administrative, technical, and support staff.

The facility must be easily accessible and must have all the modern communication channels available for interaction with remote learners (Ellahi and Zaka, 2015). (Mbugua, 2013), in a study on determinants of educational managers' support for ODL, found that a reasonable number of educational managers were not fully exposed to the distance education mode of learning despite having a background in education and many years of experience in the education sector. (Murage, 2013) observed that there were complaints from academic practitioners and opinion leaders concerning rising enrolment that is not supported by physical facilities to support ODL in Kenya. (Ndongfack, 2016) noted that the major challenge remains that of fully decentralising the learning centres. Students still have to meet at the University of Buea campus for tutorials and examination because of insufficient staff and insufficient funding. With the University of Dschang, students also have to meet on campus for practical and examination. Analysis of the three country studies shows

that at the organizational level a common barrier to the implementation and expansion of ODL is the lack of a clear and autonomous structure. Instead, ODL systems are often implemented as add-ons to conventional programmes. In the case of Kenya, (Nyerere, 2016) found that programmes do not have independent budgets or staff, nor do they have clearly defined and appropriate business models. Similarly, in Cameroon, (Ndongfack, 2016) reported that while the ten dual-mode institutions have separate ODL units, most of them do not have separate budgets, strategies or dedicated faculty to develop and deliver courses. Additionally, only two of the ten institutions have separate quality assurance (QA) units for their distance programmes; the programmes of the other eight are under the established institutional QA units, which lack ODL-specific indicators (Ndongfack, 2016) . According to (Mukama, 2016) the School of ODL, in Rwanda which operates out of the College of education, does not have a dedicated academic faculty to guide the development and implementation of ODL at the institution and conduct research to inform practice, this creates a clash of priorities between their core work and support to the School of ODL . Institutional policies facilitate the adoption of an innovation by establishing the ground for action and mechanisms for funding. (Minnaar, 2013) observed that an institutional policy establishes the rules, roles structures and functions of the ODL systems within the institution. As such, the lack of institutional policy can compromise quality. (Tedla, 2012) in the study conducted in the *East Africa* countries (*Eritrea*, *Ethiopia*, and *Djibouti*) with the exception of Somalia, established that inhibiting factors are unrealistic policies of ICT, poor infrastructure, lack of teacher competence, confidence , incentive, perception and beliefs, imposed curriculum and lack of proper network.

4.1.19 Academic dishonesty and moral misconduct is well handled for both students and staff

Table 4.18 Academic dishonesty and moral misconduct is well handled for both students and staff.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	9	8.3	8.3	8.3
	D	13	11.9	11.9	20.2
	N	17	15.6	15.6	35.8
	A	40	36.7	36.7	72.5
	SA	30	27.5	27.5	100.0
	Total	109	100.0	100.0	

Source: Primary data

9(8.3%) strongly disagreed with the above statement, 13(11.9%) disagreed that academic and moral dishonesty are well handled for both students and staff, 17(15.6%) were found to be neutral on the above statement, 40(36.7%) agreed with the statement of handling the academic dishonesty and moral misconduct in the best way, 30(27.5%) strongly agreed that academic dishonesty and moral misconduct were well handled for both students and staff. About student liability, it has been mentioned that "it has been observed that students of DE (Distance Education) indulge in unethical practices. In order to check these practices, strict measures are to be introduced by the DE for maintaining the quality of DE program." However, description of unethical policies and their consequences are required to be mentioned

in order to avoid their definitional ambiguity, for example, plagiarism. Similarly, there is a lack of indication of record management and data protection policy. According to a study conducted by (Cavner and Fox, 2014) established that there was lack of concern for ethics in general, and the ethical use of the Internet specifically, was a serious problem. In all schools at all levels, instructors did not address appropriate digital citizenship or hold students accountable to their own work. When students use large portions taken from internet or pay someone to write their paper, they miss the opportunity to learn.

Unfortunately, Ethiopian students routinely use resources from the Internet and plagiarize, claiming another's work as their own.

Likewise, the communal culture here also compounds the problem in that students ask others to do their homework for them and it is acceptable, even imperative, to comply.

It becomes easy for higher education institution students to plagiarise if they were not trained at high school level to avoid plagiarism (Khoza, 2015a); (Mpungose, 2016). This suggests the importance of higher education institutional processes that support academics' initiatives that appeal for help which will in turn develop students when they are still new at university. A study conducted by Macdonald and (Carrol, 2005) on the approach to plagiarism suggests a holistic approach with three main principles to be used as a framework for Turnitin usage. The principles indicate that: (1) it is important that students and academics receive the appropriate information and develop the necessary knowledge with skills (self-space); (2) assessment design is such that plagiarism is reduced (societal space); and (3) the usage of the program has appropriate policies, procedures and guidelines in place to deal with any issues that arise (professional space).

4.1.20 Students' requests, complaints and complements are received easily and acted on by administrators in a timely way.

Table 4.19 students' requests, complaints and complements are easily acted upon by administrators in a timely way

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	8	7.3	7.3	7.3
	D	38	34.9	34.9	42.2
	N	15	13.8	13.8	56.0
Valid					
	A	40	36.7	36.7	92.7
	SA	8	7.3	7.3	100.0
	Total	109	100.0	100.0	

Source: Primary data

8(7.3%) strongly disagreed with the above assertion, 38(34.9%) disagreed that students' requests, complaints and complements are acted on timely, 15(13.8%) were found to be neutral in regard to the statement, 40(36.7%) agreed with the above statement, 8(7.3%) strongly agreed that students' requests, complaints and complements are received easily and acted on by administrators in a timely way. Further, student support interventions should be grounded in contemporary understandings of child social-emotional, behavioral, physical, and cognitive development (Walsh et al., 2002), as schools have been increasingly recognized as critical places to support the development of the whole child. In brief, best practice recommendations converge on three primary points. Student support should: (a) address both needs and strengths of each and every student; (b) be comprehensive,

addressing academic, social/emotional, health, and family domains; and (c) be implemented as a core function of the school while leveraging community resources. In view of the statement it can be deduced that unnecessary delays are caused in terms of information dissemination as a result of absence of these facilities. He also narrated challenges encountered using internet with communication technology to facilitate communication with students (Ugonna and Adetimirin, 2014). Students were also unhappy with delayed feedback on their performance. As reported by (Hara, 2001) students experience confusion, anxiety, and frustration due to lack of prompt or clear feedback from their lecturers. Thus, delayed and ineffective feedback can add burden to learners who are struggling with the isolation and the remoteness nature of distance learning. Inotherwords, feedback in assignments should enable change to take place in an individual and this change is brought about in the individual if the feedback information is understood and used. Improperly done feedback will not help students in distance education change from wrong answers to meaningful answers. Poorly structured and handwritten comments which move back and forth from general to specific issues with less legibility can affect students' response to feedback. The barrier of submission of student homework coupled with the supervisor providing timely feedback to the student at the right time should always be avoided (Mbukusa, 2015b).

4.1.21 Students communicate easily with administrators on issues related to their studies.

Table 4.20 students adhere to the rules and regulations governing the program

		Frequency	Percent	Valid Percent	Cumulative Percent
	D	7	6.4	6.4	6.4
	N	13	11.9	11.9	18.3
Valid					
	A	66	6.6	6.6	78.9
	SA	23	21.1	21.1	100.0
	Total	109	100.0	100.0	

Source: Primary data

The findings in the table above shows, 3 2(9.6%) strongly disagreed with the statement about easy communication with administrators, 72(21.7%) disagreed that communicating with administrators was easy, 63(19.0%) of the respondents were neutral about the issue in question, 95(28.6%) agreed with the statement of easily communicating with administrators, 69(20.8%) strongly agreed that students easily communicate with administrators on issues related to their studies. The results herein show that teaching staff performance in Ugandan public universities was not considered sufficient when it comes to the roles of innovating; knowledge society facilitating; collaborating and networking; higher education designing and developing; and entrepreneurship. The study suggests that most students are satisfied with teaching and learning by distance and also satisfied with support services provided by the host institute. However, respondents had concerns regarding the provision of prompt feedback on assignments by facilitators, lack of enough study

facilities to help students with their program, the heavy workload in DL and experienced difficulty with learning materials that were not self- explanatory. Other institutional challenges faced by students are lack of responsiveness from regional centre as well as the ODeL headquarter administrative staff and delay in relaying of important information. By virtue of their program, e-Learning students can be said to be at the periphery of the university and unless deliberate efforts are made to keep them abreast of development in the institution, they may not know what is going on. Furthermore, when their queries are not responded to, it may impact negatively on their academic progress (Mukirae et al., 2016). One group mentioned that:

It is difficult to read the comments in the margin of the proposal. Some supervisors seem to have difficulties with writing. They do not know how to write words that help students. What do you do with words like 'good', 'not clear' or 'what is this?' These words do not help. As students we learn nothing from such interaction with our supervisors. They forget that they are not with us. They are far away from us.

It is difficult for students who were far away from their supervisors especially when the separation is exacerbated by the absence of telephones or any medium of communication to be satisfied all the time.

When respondents were asked through in-depth interviews on what supervisors needed to do for the students in order to help them complete faster, other respondents insisted that supervisors should:

Find time to discuss content with them, grade the assignments with intent to guide, provide feedback on progress, motivate students in the marking, praise students where they have done well, and supervise projects closely (Mbukusa, 2015b). According to (UNESCO, 2002), "communication serves two purposes. One is the

distribution of information, the second is the interaction between teachers and learners and where possible between learner-learner. In some

forms of Distance Education this learner interaction is practically non-existent, but most cases it is considered important and may be provided in different ways. New technology allows the organization of "virtual groups", and in countries where access to the internet is common, this is the fastest growing approach to distance teaching".

4.1.22 Face to face schedules are communicated to students properly and

timely.

Table 4.21 Face to face schedules are communicated to students properly and timely

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	1	9	9	9
	D	23	21.1	21.1	22.0
	N	14	12.8	12.8	34.9
Valid					
	A	45	41.3	41.3	76.1
	SA	26	23.9	23.9	100.0
	Total	109	100.0	100.0	

Source: Primary data

From the analysis of the table above, 1(0.9%) strongly disagreed that face to face schedules are communicated to students properly and timely, 23(21.1%) disagreed

with the above statement of proper and timely communication to students about face to face schedules, 12.8%) of the respondents indicated their neutrality on the subject matter, 45(41.3%) agreed with the statement that schedules for face to face were properly and timely communicated to students, 26(23.9%) strongly agreed that the schedules for face to face were properly and timely communicated to students . (Keegan, 1986) believe that the lack of feedback on performance or contact with teachers also constitute a barrier to distance students. (Keegan, 1986) argues that the link between the teacher and the student constitutes a vital link in teaching-learning transaction and that the link, which is broken by distance, must be restored one way or the other. This particular barrier creates the problem of evaluation for the student. According to findings of the study done by (Nyerere et al., 2012) established that a large percentage of students 95% said did not get feedback at all, 60.4% said received feedback on their end of semester examinations, assignments and continuous   assessment tests. (Cain et al., 2003) observed that effective communication is another vital element in students' support. In the current study, the use of SMS technology should be considered in the students' context. Through the probes, the timing of feedback came out as an issue that was raised in the discussions. Feedback arrived late to students and in some cases did not arrive at all. Supervising through distance education is different from face-to-face teaching and learning. Distance education supervision should provide as many additional resources and opportunities as possible to facilitate learning. It is not enough that students are only supervised once during the vacation school which is almost only two hours in a year. The present situation where students receive almost one hour of supervision is not good for research studies (Mbukusa, 2015a). According to the study conducted by (Ndayambaje et al., 2013) established   that an evaluation system exist and uses instruments such as continuous Assessment Test, self-evaluated assignments and examinations but still has some weaknesses such as failure to provide feedback to

learners in time, limited revision time (1 day) because examinations in most of the times follow immediately the face to face period resulting in poor performance, and ignorance of academic regulations on behalf of the learner that causes some of them to be dismissed or retake the modules.

4.2 HYPOTHESIS TWO (ADMINISTRATIVE FACTORS)

The hypothesis stated as: Administrative factors have a relationship in influencing distance learning in Ugandan universities.

To answer the above assertion, seven questionnaires were administered to 332 students to capture data on face to face sessions. The answers got from the respondents enabled the researcher to secure necessary answers to the above assumptions.

Table 4.22 showing hypothesis two correlations

		DS	AF
DS	Pearson Correlation	1	.694**
	Sig. (2-tailed)		.000
	N	109	109
AF	Pearson Correlation	.694**	1
	Sig. (2-tailed)	.000	
	N	109	109

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

According to data collected from lecturers, the correlation coefficient between DS and AF is statistically significant, it is 0.694 with p-value of 0.000 which is less than 0.05. Hence there is a positive relationship between distance learning and administrative factors

Correlations

		DS	AF
DS	Pearson Correlation	1	.190**
	Sig. (2-tailed)		.000
	N	332	332
AF	Pearson Correlation	.190**	1
	Sig. (2-tailed)	.000	
	N	332	332

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

According to data collected from student questionnaire, it shows that the correlation coefficient was 0.190 and it was statistically significant since it had a p-value of 0.000 which is less than 0.05. Hence the relationship between distance learning and administrative factors is statistically positive.

Therefore, from both samples we can conclude that, the distance learning and administrative factors have a role to play in individual's learning.

4.2.1 Study materials are provided on time to students.

Table 4.23 study materials are provided on time to students

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	39	11.7	11.7	11.7
	D	78	23.5	23.5	35.2
	N	60	18.1	18.1	53.3
Valid					
	A	97	29.2	29.2	82.5
	SA	58	17.5	17.5	100.0
	Total	332	100.0	100.0	

Source: Primary data

From the analysis of the table above, 39(11.7%) of the respondents strongly disagreed with the above statement, 78(23.5%) disagreed with the statement that study materials were provided on time to students, 60(18.1%) were found to be neutral regarding the subject matter, 97(29.2%) agreed that study materials were provided on time to students, 58(17.5%) strongly agreed with the assertion that study materials were provided on time to students. It must be emphasized that the Provision of effective support and technological infrastructure are vital for improving quality of teaching. It should be emphasized that lack of technical and student support decreases learning motivation.

Student support services such as material delivery "Course Delivery at Door Step," advisement "students is provided academic advising services," library access

"digital libraries available for all its students," and financial aid has been mentioned. However, a major concern of students' training or orientation for using the LMS or any other distance learning system is missing. It is also unclear that for courses that require lab work such as computer programming, chemistry, or else, what strategies should be adopted. It should be acknowledged that the delivery of teaching via distance learning will vary by subject, depending on the form of teaching and content that is to be delivered. In the study conducted by Mukirae et al. (2016) observed that one of the key challenges students face is delay in delivery of study materials either through the regional centres or in the Tablets as pointed out by a majority of the students (30% -Agreed; 25.1%-Strongly Agreed). This points to a lack of prior preparation by the university before an academic year/semester begins. Such delays are costly in terms of time and finances to e-Learning students who are far from campus and affects the efficiency and effectiveness of the program (Mukirae et al., 2016). According to (Atieno, 2016) study units are supposed to provide specialized study materials meant for self-learning. Availability of learning materials in DL mode is crucial for success of the program. Availability means that instructional materials should be available to be issued to the learner at the beginning of every semester. (Kimani et al., 2012) argues that instructional units were not issued to students on time studying by distance learning, some were issued after continuous assessment tests were done while others were issued mid semester. (Atieno, 2016) from the interview results from staff in the print and distribution office confirm that there were delays in the distribution of study materials. The staff interviewed indicated that this was partly due to procurement bottlenecks at policy level. Delay was also caused by transport hitches when students were in session and vehicles were not availed on time. (Okonkwo, 2012) submitted that competing academic and administrative assignments are some of reasons for delay in course material development at the National university of Nigeria since materials are developed in-

house. Nevertheless, for distance learning to be effective, there should be a deliberate effort to avail study materials to the learner at the right time. According to (Nzuki, 2012) on the issue of study materials he made a conclusion that the provision does not meet the expectations of the learners yet it is an aspect of quality in distance learning. (Nyerere et al., 2012) established that there exists a disparity in material distribution. Those in urban centers who have no problem with infrastructures like road and communication network accessed materials easily enough and had adequate time to study them while those in far flung areas received materials late and had little time to study, this was disadvantaging them. (Owusu-Ashah, 2015) stated that in order to provide quality library and information services for distance learning education, institutions must recognize the provision of library services to their students as their primary responsibility. (Kadli, 2013a) argued that a supportive and facilitating institutional philosophy should ensure that distance learners have access to quality library and information services to support learning. (Ndayambaje et al., 2013) observed that apart from the distribution of modules which also does not stick to the academic calendar, the study centers do not have own libraries or laboratories. Access to computers and internet is still limited although these facilities seem inexistent. While expatiating on the usefulness of instructional materials in the learning process, (Smaldino, 2008) argued that limited knowledge will occur if the materials are weak, improperly structured, or sequenced in a poor manner. On the other hand, good materials can be experienced in such a way that they are easily encoded, recalled, and used in a variety of ways. They concluded that instructional materials will be what the learners will remember and they must be created, integrated, and presented in a manner that allows them to have the needed impact. Materials or resources such as the computer and internet are absolutely necessary in the present day distance education. Apart from the Internet and computer,

instructional materials such as the audio, CDROM, and video (including DVD) materials are essential to distance education learners. The video and/or DVD could be played as many times as may be necessary to enable the learner fully understand the knowledge that is being conveyed.

This has obvious advantages in the learning process since the learner can refer to the materials at will. It can therefore be concluded that the teacher and student in distance education system have equal access to the instructional material On time delivery is very much important in distance and opens learning systems. Management involved with ODL should ensure the on time delivery of study materials to the learners. The entire package should be delivered in print or online (through internet) (Sadia and Mostafa, 2002).

4.2.2 The lecturers are rated as being caring, confident, experienced, creative and interactives.

Table 4.24 the lecturers are rated as being caring, confident, experienced, creative and interactive.

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	28	8.4	8.4	8.4
	D	39	11.7	11.7	20.2
	N	56	16.9	16.9	
Valid					37.0
	A	116	34.9	34.9	72.0
	SA	93	28.0	28.0	100.0
	Total	332	100.0	100.0	

Source: Primary data

From the table above, 28(8.4%) of the respondents strongly disagreed with the above assertion that lecturers were rated as caring, confident, experienced, creative and interactive, 39(11.7%) disagreed with the statement regarding the rating of lecturers as being caring, confident, experienced, creative and interactive, 56(16.9%) were found to be neutral in regard to the above assertion, 116(34.9%) agreed to the view that the rating of lecturers as being caring, confident, experienced, creative and interactive were okay, 93(28.0%) strongly agreed that the lecturers were rated correctly as far as the above elements were concerned. As mentioned earlier, in this knowledge and innovation explosion era, contemporary university teaching staff

ought to possess innovating; knowledge society facilitating; collaborating and networking; higher education designing and developing; and entrepreneurship competence, if they are to perform their duties effectively (Kasule et al., 2014). With regards to tutorials, face-to-face and laboratory practicals, respondents' challenges were socio- economic in nature like travelling distance and its accompanied expenses. There was also the issue of dissatisfaction with lecturers and tutors' performance. Students felt that most of their lecturers came to lectures unprepared and waffle around without saying anything meaningful to students. Most lecturers were described as ineffective (Musingafi et al., 2015b). (Bigatel and Williams, 2015) claim that student engagement is a strong predictor of student persistence and degree completion. As a consequence, students with teachers who received professional development performed well in their online courses and did not drop-out. According to (Risner, 2016) students were found to have negative attitude towards inadequate discussions and deviations. (Schroeder et al., 2016) argued that students expect high connectivity with their tutors and advisors. (Schroeder, 2012) stated that availability for help was expected from tutors and advisors at predetermined times. (Mbukusa, 2015a) notices that the focus groups and in-depth study revealed that supervisors did not give meaningful feedback to students.

When probed on the issues surrounding ineffective feedback from supervisors, Group 1 respondent who willingly wanted to say more separate from others had this to say:

My experience with supervisors is not good to mention. Some write whatever suits them. My draft proposal had almost nothing in the text or in the margins. But I only saw comments that suggested that I have done well on the front cover. What is 'done well'? Maybe open comments could guide me improve for a better final report. It is

impossible for lecturers to provide timely feedback to so many students, yet the students rely on such feedback to support their learning process. The prolonged timeframe for the feedback to students disables the objective of shaping and supporting learning and in most cases the students forget what the assignment was all about (Kahiigi, 2013). (Ertmer et al., 2007) also assert that the feedback process between the student and lecturer prevents students from accessing other students' submissions, thus missing out on an opportunity to learn from each other and look at different perspectives to improve the quality of their work and enhance their understanding of the course concepts . (Lwoga, 2014) in a survey at Muhimbili University established that quality-related factors such as instructors and systems are key predictor of perceived usefulness and user satisfaction for the learners.

4.2.3 Students communicate easily with administrators on issues related to their studies.

Table 4.25 students communicate easily with adminstrators on issues related to their studies.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	32	9.6	9.6	9.6
	D	72	21.7	21.7	31.3
	N	63	19.0	19.0	50.3
	A	95	28.6	28.6	78.9
	SA	69	20.8	20.8	99.7
	Total	1	.3	.3	100.0
		332	100.0	100.0	

Source: Primary data

From the table above, 32(9.6%) strongly disagreed with the above assertion, 72(21.7%) disagreed with the statement that students communicate easily with administrators, 63(19.0%) were found to be neutral in regard to the statement, 95(28.6%) agreed with the statement that students communicate easily with administrators, 69(20.8%) strongly agreed that students communicate easily with administrators on issues related to their studies. The study's findings also show that the teaching staff and students have more or less the same perception regarding the extent to which university teaching staff possesses innovation competence at Kyambogo University, while the managers have a different and a less positive perception regarding the extent to which teaching staff possess innovation competence at Kyambogo University. Appropriate supports are expected to help reduce children's exposure to high stress from non-academic challenges, thereby promoting self-regulation of social-emotional and cognitive function (Jack P. Shankoff. and Phillips, 2000). Students whose academic and social/emotional, health, and family strengths and needs are being met may exhibit an increased capacity to come to school prepared to engage and learn (Ayoub and Fischer, 2006); (Noguera, 2011). An effective unit where they could access counseling support will be desirable. It is worth noting that due to the distance between the tutor and the learner, there is the need to keep the line of communication and interaction always open. More importantly, learners' assignment feedback, other learning needs and motivation, all have to be addressed at this unit. (Brown et al., 2012), (Simpson, 2008) and (Thorpe, 2002.) explain that students are rarely concern with organizational structures of who reports to the other or which department is concerned with their issues. Therefore, they will rarely seek out support, sometimes

because they are not even aware that they require support and other times for the reason that they are already overwhelmed with other issues to the extent that they do not recognize support as a priority. Learners' support is very vital as (Duranton and Mason, 2012); (Brown et al., 2012); (Boyle F. et al., 2010.) and (Ukpo, 2006) argued that learner support is an integral part of DE, which should scaffold into every learning component during course design, development and implementation. Support should be available, accessible and adaptable. Once learner support has asserted its domain, course designers should constantly re-strategize its implementation just as frequently as they do the changes in technology and all other facets of the course. For example, every time new technology is introduced, students will require support that addresses not only the use of the new technology, but also the new format of learning materials mounted on that technology. The main challenge regarding tutorial sessions evident in the data was students' dissatisfaction with administrative support from the university. The students' experiences of administrative problems suggest disengagement from communication with the university. (Ndayambaje et al., 2013) argue that apart from phone calls, learners otherwise meet staff, tutors and colleagues during weekend tutorials or face to face sessions the unique opportunities to interact with respective faculty members of their area of specialization. Other tele collaboration forms of communication are not used. Communication is very important between teachers and student in a Distance Education environment. Without key communication, the learning is not existent. The communication being used must be an effective communication device and a positive relationship with student and teacher (Gachugi, 2013).

4.2.4 Satisfied with the technical skills of lecturers who teach.

Table 4.26 satisfied with the technical skills of lecturers who teach

		Frequency	Percent	Valid Percent	Cumulative Percent
	NO	17	5.1	5.2	5.2
	YES	209	63.0	63.3	68.5
Valid	2.00	103	31.0	31.2	99.7
	12.0	1	.3	.3	100.0
	Total	330	99.4	100.0	
Missing System		2	.6		
Total		332	100.0		

Source: Primary data

Respondents were asked whether they were satisfied with the technical skills of the lecturers who teach, 17(5.2%) indicated that they were not satisfied with the technical skills of their lecturers, 209(63.3%) were found to be satisfied with the technical skills of their lecturers who teach. Technology has potential to positively impact the processes of teaching and learning when it is used in the context of technology-rich learner-centered tasks, which simultaneously develop students' higher-order thinking skills. In order to effectively design and implement these types of tasks, teachers need robust knowledge about technology, pedagogy, and content, and the intersections. The results of this study, however, reveal that teaching staff's innovating skill in Ugandan universities is rated lowest, followed by knowledge society facilitating, entrepreneurship, collaborating and networking and higher education designing and developing skills, respectively. Overall, the study results

herein expose that university teaching staff in Ugandan Universities has insufficient skills to deliver effectively their present and future duties. This concurs with (Kibwika, 2006) who argues that teaching staff in Ugandan universities must learn to make change if they are to prepare graduates with the capability to foster socio-economic development through innovation at the workplace. Computer literacy is also a factor as many organizations have computer systems in offices, but they are not used by staff due to their inability to use them.   Lack of knowledge and information management competencies, there is very little that a person can do without knowledge (or know-how). Knowledge is power, and a staff member with little or no knowledge of ICT will never perform as well as someone who knows all about ICT (Ugonna and Adetimirin, 2014). Most Ugandan teachers don't have personal computers and therefore value school computers for personal use. Patterns of adoption in developing countries follow those in developed countries (Markon, 2013).   He further observed that barriers of ICT adoption for teachers were determined through surveys at three schools in Eastern Uganda; Teachers identified lack of familiarity of ICT resources and lack of ICT skills as the two greatest barriers to ICT integration. (Ezati et al., 2014) in the study at Makerere university established that among the staff who took part in the study acknowledged of having had no prior exposure to pedagogical skills. This relates with the findings of study conducted in Kenya by (Nyerere et al., 2012) the study stated that majority of the staff did not have prior training on DL only 32% out of 257 lectures had special training in delivery of DL. Further the study established that there were no permanent staff for DL, 125(49%) were hired on part time basis to teach, 132(51%) were contracted to facilitate but were meant for residential mode delivery. Few of the lectures acknowledged having received training on delivery of this mode of education. (Mogahed, 2017) observed that lack of training is serious problem that has been experienced. Without adequate training, multimedia technology cannot be

effective. Without computer competence, teachers' anxiety increases, and their attitudes towards computers is going to be passive. Teachers should develop their skills during their assumed free time. The training could be organized separate forms, such as; in-service, professional development, collaborative learning and peer coaching. (Cain et al., 2003) argued that the knowledge, skill and the attitudes of teaching staff are important to distance learning students. The instructor's involvement with students in an environment is vital to students' success and satisfaction. (Tarus et al., 2015) in their study established that all the key informants interviewed similarly indicated that learner support by e-learning instructors; learner and teacher skills on e-learning pedagogy; and adequate and quality e-learning content are among the most important pedagogical components necessary for successful implementation of e-learning. Apart from the workload of tutors, the other issue arising from having the same tutors teaching both conventional and DE programs is the difficulty of switching roles and teaching methods between the two programs. It implies the need for tutor training towards DE orientation at BOU, which is currently very limited according to academics Mak, "training is there but not frequent...Centrally the university has no provision or do not offer this effectively right now" and Sarker, "We are giving very limited scale training to them - it is really negligible" (Aktaruzzaman, 2017). It was further observed, that evidence of a communication disconnect between tutors and administrators was also obvious. The consequence is that they are bound to revert to the methods they are most conversant with, which is the conventional system of instruction. Linking this to the underlying theory of the ASTIDE model, the concept of self-development, policies and the instructional design together explicate the requirements of a DE tutor in developing countries. Therefore, it is important that BOU focuses on providing appropriate infrastructures for the incorporation of effective support structures (Aktaruzzaman, 2017)**. There are also a range of socio-economic and

cultural factors which limit the progress of e-learning in Bangladesh and comparable nations and these would include the lack of infrastructure, the lack of knowledge and training for academic staff, as well as a lack of capability as much academic staff have themselves been educated in the traditional methodologies (Akbar, 2005); (Fallon, 2016); (Omwenga et al., 2004). In many developing countries, however, teachers play a crucial role in the socio-dynamics and cultural aspects of education. A challenge relating to the use of ICT in education can be teachers' resistance to ICT as they may regard it as a substitute for themselves in the process (Kahiigi et al., 2009a). These aspects are crucial in the advancement of e-learning in the developing country context. The inherent challenge, however, is that teachers do not understand the integration of ICT in their teaching process and are still apprehensive about its adoption because of the perception that technology is going to replace them (Sharma et al., 2011). This perception could be eliminated if teachers were made to understand and appreciate their changing role through training and involvement in the implementation process in order to change their mindset and create a "buy in" of the innovation. This, however, requires time and effort (Kahiigi, 2013). (Biao, 2012) argue that death of trained personnel in the philosophy, principles and methods of Open and Distance Learning are among the challenges facing ODL. While large personnel is currently involved in running African ODL institutions, only a negligible portion of this personnel ever received formal training in the philosophy and principles of ODL. The Open University of Tanzania has just begun to give training leading to diplomas in ODL. It is expected that this area of the growing field of ODL will be taken seriously, very shortly by relevant institutions. Kasozi, (2003) observed that in many institutions, it has been noted that staff qualifications, research and experiences are declining. (Lentell, 2003) suggests that academics, and in particular those who teach through online and distance, should have the knowledge, be effective listeners and communicators, coaches, facilitators, mentors and problem

solvers. (Panda, 2006) argue that training is a subset of professional development and staff training is a systemic process aimed at improving the efficiency of the academics and professional staff towards achieving organizational goals, refinement and sustainability. (Opperman, 2008) proposed a training development program which should start with a needs assessment to establish the roles and competencies that the staff may require, and the skills and performance gaps between desired standards and actual standards of performance in human capital (the ODL staff members). Secondly, the development of the learning objectives determines the learning outcomes that must be achieved. In the third phase, the design of the learning opportunity will occur, after which the actual learning intervention being delivered to the identified staffs.

4.2.5 Requirements for registration are prohibitive for students.

Table 4.27 requirements for registration are prohibitive for students

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	60	18.1	18.1	18.1
	D	69	20.8	20.8	38.9
	N	87	26.2	26.2	65.1
Valid					
	A	76	22.9	22.9	88.0
	SA	40	12.0	12.0	100.0
	Total	332	100.0	100.0	

Source: Primary data

From the analysis of the table above, 60(18.1%) of the respondents strongly disagreed with the statement that the registration requirements were prohibitive, 69(20.8%) disagreed with the above assertion, 87(26.2%) took a neutral position in regard to the subject matter, 76(22.9%) were in agreement with the assertion, 40(12.0%) strongly agreed that the registration requirements were prohibitive for students. Findings from the study by (Rangara, 2015) revealed that the processes of registration and admission were not user-friendly. However, it was reported that the directorate was open to assist students when they made telephone or physical enquiries. As the systems were established, Learner support should have been incorporated into the online registration and admission system. The findings further revealed that at School of Nursing, the coordinator concurred that the process, especially for prospective nursing students still had many manual steps. First, the student needed to have his/her certificates and school grades certified by the Nursing Council of Kenya. Secondly, he/she made applications to the university which was to be processed for authenticity after which the student would be issued with an admission or regret letter. In between, the student was required to pay registration fees into the university bank account. The registration process as revealed by the Rangara's findings are not unique with other universities in Uganda that they are not user friendly. Students also raised concern about difficulties in administrative services such as registering and paying fees (30%-Agreed; 27.5% -Strongly Agreed). Though the university has numerous ODeL campuses spread across the country, they are not well staffed to deal with all student issues and many are the times that students have to travel to the Kenyatta University main campus to access some essential services like registering for a semester or payment of fees (Mukirae et al., 2016).

4.2.6 Students adhere to the rules and regulations governing the program.

Table 4.28 students adhere to the rules and regulations governing the program.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	10	3.0	3.0	3.0
	D	25	7.5	7.5	10.5
	N	41	12.3	12.3	22.9
	A	137	41.3	41.3	64.2
	SA	119	35.8	35.8	100.0
	Total	332	100.0	100.0	

Source: Primary data

From the table above, Respondents were asked whether students adhere to the rules and regulations that govern the program, 10(3.0%) strongly disagreed with the above statement, 25(7.5%) disagreed with the statement that students adhere to the rules and regulations, 41(12.3%) took a neutral position regarding the above subject matter, 137(41.3%) agreed with the statement that there was adherence to the rules and regulations, 119(35.8%) strongly agreed that students adhere to the rules and regulations that govern the program. (Ndayambaje et al., 2013) from the study conducted in Rwanda recommend that there should be specific academic regulations about Distance learning instead of using the academic regulations of on- campus students. Context and characteristics of the learners are quite different.

4.2.7 Students receive tutorials as learners' support system.

Table 4.29 students receive tutorials as learners' support system.

	Frequency	Percent	Valid Percent	Cumulative Percent
SD	16	4.8	4.8	4.8
D	51	15.4	15.5	20.3
N	64	19.3	19.4	39.7
Valid				
A				
SA	125	37.7	37.9	77.6
Total	74	22.3	22.4	100.0
Missing System	330	99.4	100.0	
Total	2	.6		
	332	100.0		

Source: Primary data

From the analysis of the table above, 16(4.8%) of the respondents strongly disagreed with the assertion that tutorials as learners' support were received by students, 51(15.5%) disagreed with the above statement, 64(19.4%) took a neutral position in regard to the above subject matter, 125(37.9%) agreed with the statement of students receiving tutorials, 74(22.4%) strongly agreed that students received tutorials as learners' support system. (Mcclary, 2013) explains that quality distance learning courses require robust support systems in the areas of academic support, administrative support, and technical support. He writes: "Academic support

involves instructors providing substantive engagement and feedback for course activities.

Administrative support involves things such as financial aid, advising, registrar services etc. For schools using technical systems to deliver education, it is not a matter of whether a student will have problems; it is a matter of when they will have problems. Academic, administrative, and technical support services should be evaluated regularly as a part of the course evaluation. In addition, evaluation data should be made available to the appropriate stakeholders to ensure accountability and ongoing improvement." According to (Galusha, 2012) "Students of all kinds want to be part of a larger school community". For both traditional and distance students, being part of that community is an important part of their social lives. As part of institutional arrangements, Universities tend to separate regular traditional students from distance students during official activities such as matriculation and congregation. According to study conducted by (Markon, 2013) found that remedial offer an ideal time to try implementing ICT materials. Using remedial for ICT integration would benefit from there being no other classes competing for time or classroom space. Lessons could be done using a projector or the class could be split into sections to use laboratory computers. The instructing teacher could cooperate with the ICT instructor to assist in the lesson, lessening the pressure to perform tasks they aren't confident about. (Stevens and Kelly, 2012.) and (Thorpe, 2002.) affirm that learner support is an important requirement not only for distance students but also for pure online students using the latest learning technologies. Therefore, planning should include learner support. According to (Ryan, 2004), (Tait and Mills, 2004.) and (Tait, 2003), when planning for learner support services, the most important consideration should be the needs of the student, driven both externally and internally. Such consideration recognizes the student's experiences and challenges

that arise in his/her daily life in and out of school. According to (Rangara, 2015) the principles of learner support also advocate for students' responsibility in their learning. There is mutual shared responsibility between the learner and the university. The learner must be responsible for the services and learning provided by the university while the university must provide learning and all appropriate support as per the course requirements. It is however, important to emphasize that the university should clearly communicate the support for which it is responsible and that which the student will source for and access for themselves. The role of the tutor mostly entails facilitating group discussions by using tutorial worksheets developed by the lecturer and based on the subject content of different core modules (University of Pretoria, 2010.). (Brigley and Kell., 2007.) argue that the tutor must help students to make sense of the course material, integrate the acquired knowledge with educational practice and self-develop as educators. The tutor should be knowledgeable about the subject, prepare for the session and be able to refer students to other sources of support (Lawton, 1997.); (Sherry, 1996a). Tutorial sessions were perceived by all students as a useful support structure that gave them the opportunity to better understand the course material through interaction with other students (Ogina and Mampane, 2013). The distance education students interviewed in the study found tutorial sessions to be beneficial. They could better understand the subject content through peer learning and support, which enabled them to perform well in assignments and examinations. The extent to which students expressed their appreciation to the tutors after passing exams confirmed that the tutors were doing a good job and they felt motivated by the students' acknowledgement.

4.2.8 During face to face sessions, lecturers give necessary support to students.

Table 4.30 during face to face sessions, lecturers give necessary support to students.

		Frequency	Percent	Valid Percent	Cumulative Percent
	D	13	11.9	11.9	11.9
	N	14	12.8	12.8	24.8
Valid		53	48.6	48.6	73.4
	A				
	SA	29	26..6	26..6	100.0
	Total	109	100.0	100.0	

Source: Primary data

Findings in the above table indicates that, 13(11.9%) of the respondents disagreed with the above statement, 14(12.8%) were found to be neutral with the statement, 53(48.6%) agreed with the statement that students got necessary support, 29(26.6%) strongly agreed that during face to face sessions lecturers gave necessary support to students. This makes it critical that distance learning courses be taught by instructors who are passionate about their subject, approachable, and able to encourage engagement in the distance medium. It also requires universities to hire distance learning instructors who can engage the student in both the subject matter and how they convey their knowledge. "Good distance learning instructors are able to knowledgably engage students on the mechanics of writing style and the topic they are instructing discussions and research in distance education point to both positive

and negative reactions about the usefulness of CS. (Holmberg, 1982), for instance, states that CS often prove to be very useful and successful in supplementing the study materials, focus on examination topics and activities, offer students opportunities to interact among themselves, and share ideas.

According to (Segoe, 2012.), (Commonwealth of learning (COL), 2009.) and (Creed et al., 2005) there are two broad components of learner support. The first one is the tutorial support and the second one is the organizational and emotional support. Tutorial support includes intellectual, mentorship, tutorship and all learning activities while organizational/emotional support comprises of guidance, counseling, administrative procedures and any other non- academic student concerns. Again, this categorization is appreciable only for advisory purposes because it otherwise has potential problems. For instance, if teaching and learning are classified only as tutorial support, then it will be difficult for both the teacher and the student to undertake counseling for emotional issues that arise during teaching and learning. (Rangara, 2015) observed that in many instances, the student cultivates a strong relationship with the teacher because they have frequent interaction. This necessitates that the teacher provides initial counsel in the face of an immediate problem and then have the option to continue with the service or refer the student for further management. For the student, meeting with a different counselor other than the teacher means that more time is spent in cultivating a new relationship before the problem is addressed. Ideally, the teacher should be the first counselor, only referring the student to the professional counseling office if the emotional issues are complicated and adversely affecting learning activities. Another predicament with this categorization is that it can easily miss numerous processes that require support but which do not fall on either tutorial or emotional support. These are processes which may fall into both tutorial and organizational

support. For instance, technology is an organizational concern, but because it is the media for learning and the platform for delivery of learning materials, it also becomes a tutorial issue. Most often the tutor gives support on matters like formatting/writing, use of software and access of learning materials. Classifying components of learner support is, therefore, a difficult matter. According to the survey done by (Mukirae et al., 2016) in Kenya established that between May and August 2016, only 61% of the units were facilitated on-line. The converse of this is that 39% of the students were left to learn on their own without the guidance of the lecturer. As one interviewee involved in the management of ODL program noted; " some lecturers just dump content on-line and leave students to read on their own." (Atieno, 2016) in the study established that majority of the respondents (80%) expressed that counseling services as support was very important to learners on distance learning program. (Bowa, 2010) argued that learner support services contribute immensely to academic performance of the learner. This agrees with (Mboroki, 2011) who stated that class attendance by distance learners was at 84.7%, this confirms that the importance distance learners attach to learner support services (Makoe, 2012.); (Mayisela, 2013.) that technology in teaching and learning should not take precedence. It should be the students' learning and the pedagogy first, but effectively and efficiently supported by technology to narrow the gaps as indicated by transactional distance. In this way, online learning might be better able to take into consideration the needs of all UNISA students and may potentially find acceptance and usability by all students irrespective of locality. In their study on the Distance Training Program, (Ndayambaje et al., 2013) revealed the weaknesses of the program with the following points: failure to use innovative technologies, limited resources such as library access and textbooks, poor record and learner support systems, inadequate number of staff and facilities, and high student dropout and failure rates. In terms of support, it was interesting that none of the Bangladeshi

community, particularly students and tutors (n=15) raised the need for a support system, which would ultimately benefit them. While BOU has a Student Support Services (SSS) division, its functionalities are limited to registration, examinations and results (Aktaruzzaman, 2017). Although distance learning programme is cheap the internet cost, buying materials for reading and cost of travelling all together make distance learning quite expensive. The findings also indicate that many respondents were dissatisfied with the support given by tutors which has greatly affected their completion (Gachugi, 2013). (Biao, 2012) in the study conducted in Lesotho revealed that of all the identified learner support services, the running of tutorials and the provision of internet café, business centre and restaurant services were indicated as poor by 99%of the learners. Although in many centres across Africa, such services may exist because of the availability of means and resources to provide these things, it is noted that Open and distance learning institutions on the continent usually play down on the need to provide tutorials to their learners; there is a general belief that distance learners are mature and independent enough to run and guide their own learning. Libraries can offer another avenue of student support leading to successful transition. Libraries increasingly involved in teaching academic skills such as information literacy, and matter to student experience because they socialize learners into academic life (Brunton et al., 2016). (Murphy et al., 2014) observed that the nature of inquiries and decision making processes are quite different for adult learners from those of school leavers entering higher education. They recommend that there is need to have clear routes of inquiry for adult learners who are seeking for more generic advice on a range of options at higher education institution.

4.2.9 Study materials are prepared and delivered to students on time

Table 4.31 showing whether study materials are prepared and delivered to students on time.

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	18	16.5	16.5	16.1
	D	29	26.6	26.6	43.1
	N	19	9.2	9.2	52.3
Valid					
	A	41	37.6	37.6	89.9
	SA	11	10.1	10.1	100.0
	Total	109	100.0	100.0	

Source: Primary data

In the table above, 18(16.5%) of the respondents strongly disagreed with the statement that study materials were prepared and delivered on time, 29(26.6%) disagreed with to the statement of study materials being prepared and delivered on time, 10(9.2%) took a neutral position regarding the above subject matter, 4 1(37.6%) agreed with the statement of timely preparation and delivery of study materials, 11(10.1%) strongly agreed that the study materials were prepared and delivered on time. Logistics, student support, faculty development and the production of multimedia materials are all formidable undertakings for even the most superior institutions. The use of high-quality materials in CS, a key component in fostering and maximizing learner independence and self-sufficiency (Hurd et al., 2001); (Vanijdee, 2003), was another recurrent point in the journals. Indeed, mini-

quizzes designed for each of the five contact sessions of the module were used to consolidate students' learning of the DL material through self-assessment activities. For the learner, a 'freedom' such as the one described by the (UNESCO, 2009) report is central. The report refers to characteristics of the resource itself (how well the resource travels, how well it encourages engagement). However, despite the availability of OER, users in general and learners in particular are still faced with barriers to accessing resources, notably academic literacy in English (Morgan and Carey, 2009) and digital literacy (Lane, 2009). The issue of delayed study materials deserves further discussion. Follow-up discussions with respondents revealed that students were not happy with delayed study material, especially modules. Most of the respondents (95%) received study materials late or never got them. In this situation students are affected academically, psychologically, and financially (Musingafi et al., 2015b). Lack of study materials may force students to submit assignments that are not properly written and they are likely to get to examinations without enough preparation resulting in poor performance. Such poor performance may not be the true reflection of their academic abilities. Professional development of educators is also often limited and sporadic. (Aktaruzzaman, 2017) in their study conducted in Bangladesh revealed that the male and female student groups (n =10) highlighted issues with the challenging content of texts, limited number of classes to complete a course and late arrival of materials. The tutor group also questioned the appropriateness of course materials and number of classes for completion of course content. Jahangir, an English course teacher, commented that, "The subject matter of the English course of Higher Secondary and Bachelor level of BOU is not appropriate for the students of that level and also not commensurate with their previous education. These subject matters should be revised in terms of familiar topics and practical orientation. (Gachugi, 2013) in her study found that most of the respondents experienced problems as a result of lack of equipments at 60 %, 25 %

of the respondents have a problem with access to reading materials since they have no access to libraries from their homes where as 15 % experience problems with the travelling expenses. This implies that most of the distance learners lack adequate equipments for their programmes.

4.2.10 Students on distance learning program graduate on time

Table 4.32 showing whether students on distance learning program graduate on time.

		Frequency	Percent	Valid Percent	Cumulative Percent
	D	13	11.9	11.9	11.9
	N	19	17.4	17.4	29.4
Valid					
	A	47	43.1	43.1	72.5
	SA	30	27.5	27.5	100.0
	Total	109	100.0	100.0	

Source: Primary data

From the analysis of the table above, 13(11.9%) of the respondents disagreed that students on distance learning program graduate on time, 19(17.4%) took a neutral position on the above

subject matter, 47(41.3%) agreed with the above statement that students on distance learning program graduate on time, 30(27.5%) strongly agreed that students on distance learning program graduate on time. According to (Carr, 2000), distance education mode of learning is faced with a lot of problems. This is due to the fact that most distance learning programmes are beset with higher attrition rate. (DiBiase,

2000) observed that with the growth of distance education over the years, there have been problems of high degree of learners in most distance learning institutions worldwide, including the University of Ghana Distance Education Programme (UGDEP) learners' enrolment and completion rate in any distance learning institution should get continuous attention from researchers and providers. Another challenge common to all the centers was the inability of the enrolled students to complete their respective programmes. At one center, for instance, as many as 37 percent of students who enrolled for the degree program dropped out with 21 percent of the first batch of diploma students also abandoning the program. At another center, 73 percent of students who started the diploma program graduated while 60 percent remain on the degree program.

Respondents that disagree to the institutional support could be arguing from the angle that some interviewees talked about concerning the late release of quiz and examination results. This was considered problematic as students who had to re-sit examinations do not get to know early enough to prepare for them. The late release poses challenge to their early completion of their programmes to graduate. In the same vein, they raised concern about the short duration and time allocated for tutorials. This is because they travel from far to the study centre for the tutorials and would wish to close early to enable them get back to their destination early enough to prepare for the following week's activities. The student's academic journey from the period of registration to graduation is referred to as his/her student walk (Subotzky and Prinsloo, 2011) and (UNISA, 2010) or student life cycle (Ryan, 2004). According to (Ryan, 2004) during this period, there are critical points during which the student should receive proactive support to ensure a smooth academic life. These include: the initial time when the student is thinking of the possibility of studying, questions on the credibility and integrity of the institution, program

information, self-evaluation, decision making on career, enrolment and registration, payment and funding options, preparation for study, technical coaching and help, studying, motivation, annual re- registration, course progression, graduation and alumni. The configuration of ODL modes at the University of Rwanda raises another problem, lack of flexibility. For example, across all the four ODL modes of delivery mentioned above, distance learners were required to register per year and per program, rather than per module. All learners had to undertake the same six modules each semester without any possibility to choose elective modules. Any cohort of distance learners had to start and finish the program at the same time. Lack of flexibility may explain partly the high repetition and dropout rates in the Distance Training Program as referred to above (Mukama, 2018). A recent study by (Rashid et al., 2015) into the Diploma in Computer Science and Application (DCSA) attributed decreasing enrolment trends to a number of external and internal issues, which were quite telling. They included personal workload, difficulties in understanding course materials, lack of strategic direction, insufficient human resources, political influence and nepotism, delay in production and delivery of course materials, lack of monitoring and evaluation and absence of an executable policy formulation. Nonetheless, although universities continue to attract students in their PhD programmes, the challenge to complete these programmes on time has remained weighty (Shariff et al., 2015). Further the findings shows that most respondents did not receive feedback on time, a number of them cited lack of preparedness and other technical problems as other major factors influencing the completion of distance learners in KEMU (Gachugi, 2013). According to (Mhehe, 2002) , observed that distance education students are perceived to have more challenges than their conventional counterparts and this has the tendency to cause distance learners to drop out from their programmes. (Benakani, 2009) argue that dropout is a phenomenon caused by learners' characteristics (educational

background, personality, motivation, aptitude and so on) and life circumstances (occupation, relationship with family and peer group, health and so on). (Kwapong, 2008) noted there is evidence that distance education has the prospects of overall development of society, and reality also exists that distance education students are perceived to have more challenges than their conventional and this has the tendency to cause distance learners to drop out from their programs. It is widely acknowledged, though not widely published, internationally that flexible learning courses have appreciably lower rates of retention and graduation than full-time campus –based courses. It is perhaps not in an institution's interest to publicise low completion rates of their flexible learners, especially when trying to attract new learners. (Gallie, 2005) argue that some reports put student attrition in ODL to be as high as 80% . This in agreement with the UK Open University's reported completion / graduation rate of around 22% (Woodley, 2014), as compared to a (British) national rate of 39% for part-time students. Both these flexible learner graduation rates compare poorly to 82% graduation rate of full-time students (Woodley, 2014).

4.3 Hypothesis Three (Information technology)

The hypothesis stated as: Information technology have a relationship in influencing distance learning in Ugandan Universities.

To answer the above assertion, seven questionnaires were administered to 332 students to capture data on face to face sessions whether students got necessary support, tutorial support, knowledge and experience of lecturers, technical skills for teaching in distance learning, peer support, basic computer knowledge and research

as part of the course requirement. The answers got from the respondents enabled the researcher to secure necessary answers to the above assumptions.

4.3.1 Students receive tutorials as learners' support system.

Table 4.33 students receive tutorials as learners' support system

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	16	4.8	4.8	4.8
	D	51	15.4	15.5	20.3
	N	64	19.3	19.4	39.7
Valid					77.6
	A	125	37.7	37.9	100.0
	SA	74	22.3	22.4	
	Total	330	99.4	100.0	
Missing System		2	.6		
Total		332	100.0		

Source: Primary data

From the analysis of the table, 16(4.8%) of the respondents strongly disagreed that the students receive tutorials, 51(15.5%) disagreed with the above statement, 64(19.4%) were found to be neutral with the statement, 125(37.7%) agreed with the view that there was receipt of tutorials as learners' support, 74(22.4%) strongly agreed that students received tutorials as learners' system. All the public universities had both fiber and wireless connectivity. Because DE is technology-driven, any

212

change in technology has the potential to cause proportionate changes in functions of a DE system. This is a challenge to numerous and diverse policies available for DE practice which in turn have also affected the provision of learner support. For example (Baggaley, 2011) observes that the internet (a modern driver of DE) is posing serious challenges to the policies and practice of DE in ways that are yet to be understood. (Baggaley, 2011) states that "no innovation has marched so quickly and so confidently into the field of learning" with irreversible and adverse effects. However, 76% of the respondents said that the bandwidth as well as the number of hotspots to access the Internet was insufficient. The adoption of an innovation has also been shown to be affected by the infrastructural environment. In the case of the dual-mode model, particularly with the growth of online learning, the extent of adoption appears to be affected by infrastructure, such as electricity, availability of computers, and internet connection. In the studies from Cameroon, Kenya and Rwanda, respondents reported limitations to accessing technology, the internet and or electricity (Mukama, 2016) ; (Ndongfack, 2016); (Nyerere, 2016).

In this regard, lecturers ranked insufficient Internet connectivity the second most serious challenge impeding the adoption of c-learning in public universities. The only exception was the lectures in UoN who ranked this problem the fourth most serious challenge. These lecturers explained that they enjoyed a relatively high bandwidth and wireless connectivity in the university. However, (Braimeh, 2008) raise concern about this approach of restoring the teaching learning transaction in Africa because of the low development of the ICT sector. It is further argued that the use of ICT in distance education poses a lot of challenges due to uneven and unequal access to computers and the internet and most importantly the fact that power supply is unstable. (Markon, 2013) in the study observed that keeping power problems from disrupting the computers is a difficult challenge. Computers require an

uninterrupted power supply (UPS) to protect them from the irregular current and outages of the Ugandan power grid. A UPS stabilizes current and provides battery power if power is suddenly lost, allowing the user to safely shut down and protecting equipment from power surges limiting the financial impact. First, the impact of ICT in DE is yet to be appreciated even though its effects are widely observable (Tait and Mills, 2013.) One of the effects of ICT is in the administration of DE. Distribution of labor has changed significantly from the days of postal correspondence and courier of learning materials. Where students previously needed to contact a tutor at a study centre or a regional office, he/she can now contact the head office directly through computer-enabled communications. A third indicator for change is that regional centres need to transform from the intermediary status to regional campuses especially with the advent of ICT. In modern regional centres, DE students can access all services and establish identity just like their colleagues at the head/main campus (Tait and Mills, 2013.). Fourth, there is combined impact of increased working hours, the demand for lifelong learning and the outdated ODL rhetoric that students can learn while they work. Students are increasingly challenged by having to work and be expected to manage their learning in their free time, already reduced by excess workload. In fact, empirical research in the future will need to prove that ODL students just like their counterparts in face-to-face formats also need study leave from their places of work. Furthermore, it can no longer be assumed that distance students have facilities at home which can transform to quite study rooms or libraries when they get home from work (Tait and Mills, 2013.).

According to (Simpson, 2008) there are two main approaches to the provision of learner support services in DE. The first one, (reactive) involves identifying students' weaknesses, then proposing and implementing possible solutions. The second, (proactive) is to provide guidance and counseling to all students to develop learning

and coping skills, which are presumably the basic needs for students of distance learning. According to (Segoe, 2012.), stages at which students critically need support also form the basis for classifying the types of learner support that are required in DE learning formats. The stages include registration support, student services, contact sessions, technology support and feedback strategies. Even though support is an ongoing and continuous process, these stages are classified into stages/phases for the sake of planning and implementation. There are challenges on learner support services as evidenced by the findings of the study conducted in Botswana that revealed that the greatest challenge facing ODL tutors was the minimal learner support (Sikwebele and Mungoo, 2009). According to (Macintyre and Macdonald, 2011) student support can be strengthened through mediation and creation of strong ties and connections between the university and student. The main support is easily achieved through strong connection with individual tutors. The findings from a number of studies conducted at UNISA revealed that students still inadequately use e-tutoring. (Mbatha and Naidoo, 2010.) ;(Makoe, 2011.); (Pitsoe, 2015.). An inviting environment in the form of support provision for all students, including those marginalized in the far rural areas, has the potential to reduce transactional distance. The learning content adaptable for commonly used devices such as cell phones, and the changing of students' attitudes towards cell phone suitability for learning, could help improve the utilization of e-tutoring. Notwithstanding the need for continual teaching and training of students about the learning facility they use, the human face of the e-tutors before the start of a tutorial session may be an added advantage to the improvement of e-tutor usage. (Rokoma, 2018). (Tarus et al., 2015) established in their findings that it is evident that majority of the respondents believe that learner support and motivation by e-learning instructors; learner and teacher skills on e-learning pedagogy; and adequate and quality e-learning content are the three important pedagogical components necessary

for successful implementation of e-learning. (Biao, 2012) observed that low level of utilization of Information Communication Technologies (ICT) within the area of ODL in Africa were a big challenge. Adds that the main issue that needs to be to addressed before a high utilization of ICT-based strategy may be experienced in Africa is the steady supply of electric power. According to (Biao, 2012) , no African country, including South Africa, is currently self-sufficient in electric supply; yet, one may not meaningfully run an ICT-based ODL project without adequate supply of electricity. All African ODL projects except that of the African Virtual University, currently run solely on printed materials and minimal face-to-face meetings in order to overcome the issue of electricity. It should be stated that a combination of such practice with some ICT –based strategies has a greater chances of impacting more positively on Open and distance learning adequately.

Table 4.34 study materials are provided on time to students.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	39	11.7	11.7	11.7
	D	78	23.5	23.5	35.2
	N	60	18.1	18.1	53.3
	A	97	29.2	29.2	82.5
	SA	58	17.5	17.5	100.0
	Total	332	100.0	100.0	

Source: Primary data

From the analysis of the table, 39(11.7%) of the respondents strongly disagreed that study materials are provided on time, 7 8(23.5%) disagreed with the above statement of timely provision of study materials to students, 60(18.1%) were found to be neutral with the above subject matter, 97(29.2%) agreed to the statement of providing study materials to students on time, 58(17.5%) strongly agreed that the study materials are provided to students on time. While the developed world is increasingly embracing e-learning, the same is not true of Africa. According to (Mpofu et al., 2012b), the adoption of e-learning in Africa is slow, as evidenced by the low number of African scholars who are familiar with teaching in an online environment. (ICWE., 2009), reporting on a survey of 147 e-learning practitioners from 34 countries in Africa, observed that e-learning was developing at a slow pace due to many challenges that impede its adoption and utilization in the universities. The most notorious challenges included: lack of human capacity as very few lecturers were trained extensively on how to use e-learning; and financial constraints to meet the cost of bandwidth and other e-learning infrastructure. This relates with the findings of (Nyerere et al., 2012) in which was observed that lack of library to be accessed by tutors was a challenge for DL program. Institutions lacked current journals and publications on DL and could not subscribe because of limited funding. It may not go without mention that this could have contributed to the delay by the tutors to produce the study materials and have them ready on time for the students. (Aktaruzzaman, 2017) in the study conducted in Bangladesh revealed that, SRG members partially acknowledged delays in the printing of course materials and their distribution. According to senior academic, Manwar, "In small programs… there is no delay but in cases involving 30,000 students, there may be some delay due to complexities of the government offices in printing the huge number of materials". Yet Sarker, who was a senior academic also undertaking further study, explained

that, "I am also a student of the BEd program of this university and have not got any materials up to now. The semester is going into the third month".

4.3.3 Internet is affordable and accessed by students on distance learning.

Table 4.35 internet is affordable and accessed by students on distance learning.

		Frequency	Percent	Valid Percent	Cumulative Percent
	SD	44	13.3	13.3	13.3
	D	79	23.8	23.9	37.2
	N	65	19.6	19.6	56.8
Valid					
	A	88	26.5	26.6	83.4
	SA	55	16.6	16.6	100.0
	Total	331	99.7	100.0	
Missing System		1	.3		
Total		332	100.0		

Source: Primary data

From the analysis of the table above, 44(13.3%) strongly disagreed with the above statement, 79(23.9%) disagreed that internet was affordable and accessed by students, 65(19.6%) took a neutral position in regard to the subject matter, 88(26.6%) agreed with the statement that internet was affordable, 55(16.6%) strongly agreed that internet was affordable and accessed by students on distance learning. Internet is a network consists of some of different networks connected

together through a protocol. Internet is very critical for communication purposes. It has changed peoples' life at home, educational environment and at work place. Internet has quite a number of applications in our everyday life and these unique features have doubled its attraction (Hasanzadeh et al., 2012). Further observe that communications through computer and internet is a part of life reality. The revolution in computer technology and communication through the internet in the present culture has found an increasing role. Internet and computer technology has an effect on all people and at different ages.

(Walimbwa, 2008) observed that despite e-learning growing rapidly worldwide, East African universities were yet to fully maximize their potential; a problem that was blamed on insufficient resources and an indifferent attitude. Walimbwa's study focused on the University of Dar es Salaam (Tanzania), Makerere University (Uganda), and the University of Nairobi (Kenya). It revealed a lack of requisite skills and sufficient human capacity for the meaningful implementation of e-learning in these universities. Limited Internet bandwidth and no policy for harmonization were also significant factors that hindered the rapid adoption of e-learning in these universities. In Africa, despite a keen interest in the notion of computer networking, governmental and institutional policies often restrict or refuse usage for those who may have the greatest need. In some cases, for example, externally funded projects have made possible the acquisition of computers to support networking for a regional distance education project, which has ultimately resulted in a computer laboratory on a campus equipped with, say, 75 new computers available only to faculty and staff who are able to pay for usage. Compounding the adverse effect of these various limitations and constraints is the relatively low level of institutional collaboration. Ironically, those who advocate an urgent need for greater networking of their institution's computers to advance online learning often seem little inclined to

network with one another, forcing them to pursue such initiatives largely on an independent basis, making them less feasible. Internet access is therefore limited in many of the rural communities in SA, with access often gained through cell phone usage, which has a limited bandwidth. Tertiary education sector is not particularly integrated in the ICT government program development, resulting in having no ICT policies or implementation programs (Farrell., 2007).

In fact, Ko37 declared that with the current low levels of ICT access, SA would find it difficult to provide most citizens with access to public services, such as e-government, e-entrepreneurship and e-learning services. Access to adequate technology (hardware) and reliable and affordable connection (bandwidth) are also often taken for granted (Santos et al., 2008); (UNESCO, 2009). Clever work by the administration and effective budgeting can satisfy each group in the school. The administration should be able to use some ICT monies to pay for costs associated with the computers. The electricity bill for the school, cost of printing supplies, cost of repairs and maintenance all can be paid from that fund. Money can be set aside for improvements to the lab, buying or upgrading computers, purchasing new software or items requested by teachers for use in the classroom (Markon, 2013). According to (Fadl elmoula and Yassin, 2017) the technical challenge is considered as the most important challenge facing the adoption of e-learning. To mitigate these challenges, there should be strong and updated infrastructure put in place, including modern technology, fast internet connection, continuous power supply, security, regular maintenance and efficient administration. The inadequacy of the above mentioned elements will cause failure of e-learning adoption. Additionally, they lacked adequate time to devote to the development of interactive modules. These challenges were compounded by the fact that most universities lacked appropriate and adequate e- learning infrastructure to support the development of interactive e-

learning content (Makokha and Mutisya, 2016). All the public universities have both fiber and wireless connectivity. However, 76% of the respondents said that the bandwidths as well as the number of hot spots to access Internet are not sufficient. Interviews with some of the senior managers of the universities revealed that the cost of Internet was high and prohibitive. Additionally, the remote location of some areas, far from Internet signal was described as a major hindrance to Internet connectivity (Makokha and Mutisya, 2016). (Eom, 2014) concludes from the study conducted that readiness for online learning enhances students' satisfaction with online learning systems. The students surveyed reported that their ability and skills to use the internet and many other telecommunications media foster their readiness for online learning. (Heydenryck and Prinsloo, 2010.) further emphasize that access to the Internet and the lack of technology skills often creates a challenge when there is limited access to electricity and the telephone networks and when student do not have expertise in using computers to search online resources. (Makoe, 2011.) argue that the socio-economic status of students and the affordability of technology and poor infrastructure in the living areas of students, contribute to the digital divide prevalent amongst students, particularly the rural students. They further state that agreeing to the discontinuance of the introduction of online learning will be perpetuating the digital divide. (Letseka and Pitsoe, 2014) acknowledge that "Sub-Saharan Africa, though having adopted technology to open-up learning to those students who would otherwise not have had the opportunity to be in higher education, faces more challenges in terms of infrastructure and institutional, physical and human capacity to provide that learning". Certainly, the socio-economic statuses of such communities contribute massively to the limited access of the online learning tools (Rokoma, 2018). The first sub-theme related to the lack of Internet cafés at their areas of residence or the distance between their residences with Internet cafés. One participant mentioned the availability of Internet cafés in his/her area but

221

lamented the monetary cost incurred to use the Internet café. The Internet cafés were generally expensive and some of them far from the participants' homes. There were also no suitably skilled people in these Internet cafés to assist them with accessing the UNISA facilities. The Baseline study on the status of ODL in Rwanda (Mukama, 2016) indicates some constraints of Tele-Education in the country, including low-bandwidth Internet connectivity and limited capacity of the learning space in terms of seats, rooms, and ICT infrastructure. Due to a small local Internet bandwidth, the system was not able to accommodate teaching and learning materials. (Ndong fack, 2016) in a baseline survey conducted in Cameroon revealed that institutions still experience the following challenges;

• There is an inability to reach many students due to poor and limited Internet bandwidth and access, especially for those in the rural communities.

• There is an inability for local universities to produce their own courses (for example, the University of Dschang does not offer courses above Diploma level although the university started in 1995).

• Lack of training for staff, equipment and infrastructure are some of the challenges reported by the distance learning units. (Tarus et al., 2015) in the study in Kenya, the findings revealed that computers and other e-learning access devices; network connectivity and Internet bandwidth; and reliable learning management system (LMS) are among the most important technological components necessary for successful implementation of e-learning. These technological components play a critical role in facilitating accessibility to e-learning by the users. Such technological components should be adequate to support a large population of users accessing e-learning. The common facilities used by the students in a university like lecture halls and halls of residence should have network and Internet connectivity to facilitate accessibility to e-learning. LMS as an important tool for student administration,

tracking, and delivery of e-learning education courses should be efficient and reliable for many students at the same time. (Gachugi, 2013) in her study established that 60% of the respondents said that they find internet costs to be too high, 20% said extra cost arise from books and another 20% had to enroll for extra packages for example computer studies alongside the programmes which is very expensive and exhaustive too. In addition, several factors which included: inadequate and unreliable ICT infrastructure, lack of ICT skills, traditional pedagogical culture, ICT support and management support affected e-learning development (Kahiigi, 2013). The costs of ICT integration and e-learning implementation usually include purchase, setup and testing, internet subscription, services and maintenance as well as training. This becomes expensive for those schools that do not receive grants specifically for the purpose of e-learning implementation since reliance only on fees collection is neither sustainable nor sufficient in both the short and long run (Oroma et al., 2012). (Mutua, 2016) in their study conducted in Kenya established that low investment in ICT infrastructure coupled with high cost of connectivity and bandwidth are two major problems that affected the development of ICT infrastructure. One of the barriers to development of ICT in schools is the poor condition of technology infrastructure, in terms of quantity and quality. The poor conditions affect the ease to access information. In connection with the availability of infrastructure it makes access to information costly, which in turn makes the use of ICT low. (Oyeyinka, 2004) observed that many developing countries face capacity constraints, mainly as result of thin-bandwidth and frequent power outages. Bandwidth is one of the scarcest ICT resource in African universities and this is mainly due to restrictions on academic institutions in accessing international circuits and high licensing fees for connecting to advanced circuits for obtaining authorization (Adam, 2003). According to (Adam, 2003) economic factors ranging from the lack of capacity to pay for costly infrastructure to sustaining computer

networks introduced through donor funding weighed on the schools as their budgets continued to get slashed.

4.3.4 Study materials are prepared and delivered to students on time.

Table 4.36 study materials are prepared and delivered to students on time.

		Frequency	Percent	Valid Percent	Cumulative Percent
	D	18	16.5	16.5	16.5
	N	29	26.6	26.6	43.1
Valid		10	9.2	9.2	52.3
	A				
	SA	41	37.6	37.6	89.9
	Total	11	10.1	10.1	100.0
		109	100.0	100.0	

Source: Primary data

The findings in the table indicates that, 18(16.5%) strongly disagreed that study materials are prepared and delivered to students on time, 29(26.6%) disagreed with the above statement of timely production and delivery of study materials, 10(9.2%) were found to be neutral with the subject matter, 41(37.6%) of the respondents agreed with the statement that study materials are prepared and delivered on time, 11(10.1%) strongly agreed with the above view that the study materials were prepared and delivered to students on time. However, certain problems are associated with the logistical organization of CS. For example, (Agboola, 1993) points out that CS needs to be properly organized, e.g. classrooms secured, tutorial

staff sought and employed in adequate numbers, meetings scheduled, instructional materials designed and delivered in time, students informed, etc. (Basaza et al., 2010): online journal, noted that although distance education particularly in the higher education sector could accelerate development within Uganda, there are several challenges that still inhibit its implementation namely; lack of adequate physical and human infrastructure to cope with the demand for post- secondary education, more than 40 registered universities are located in the central or urban regions of the country, yet the majority of the population lives in rural areas, inadequate expertise in distance education, poor attitude towards distance learning; among others. The issue of delayed study materials deserves further discussion. Follow-up discussions with respondents revealed that students were not happy with delayed study material, especially modules. Most of the respondents (95%) received study materials late or never got them. In this situation students are affected academically, psychologically, and financially. Lack of study materials may force students to submit assignments that are not properly written and they are likely to get to examinations without enough preparation resulting to poor performance. Such poor performance may not be the true reflection of their academic abilities.

Some students may persist at slow pace, resulting in late completion of programs. Others withdraw from studies. The public (employers included) may question the individual student's academic abilities on the ground that why does it take him /her long to graduate. Also, the quality of education provided through ODL becomes questionable.

Delayed or lack of study materials may affect students economically as they waste resources in terms of money and time; patiently waiting for the arrival of study materials and sometimes travelling to regional center to make a follow- up, but finding nothing.

According to the findings from the study by (Rangara, 2015) it revealed that delivery of learning materials through ICT formats received the widest disparity of ratings, with a rating of 1 from 25% from respondents of WU and 73% from those in NU. (Nyerere et al., 2012) in the study conducted in Kenya observed, production of high quality materials appeared far more expensive because the cost would include the design of the curriculum and course authors' fees and other expenses. Further, add that because of such fears the staff was forced to use study materials meant for residential model of education, which cannot effectively communicate to learners separated from their tutors. (Gachugi, 2013) from the study revealed that irregular and unsystematic supply of learning materials, untimely tutorial help and or poor quality of supplied learning materials and lack of study centres within the neighbourhood are among the top of the list of the severe problems faced by distance learners.

4.4 Qualitative data analysis

Interviews were conducted with officials from national council for higher Education. They were interviewed on the general theme of the quality of the distance programs in Uganda. The responses are presented as follow; -

4.4.1 Existence of Quality assurance mechanisms in distance learning.

Respondents were asked whether quality assurance mechanisms exist for distance learning, 7(35.0%) of the respondents were of the view that the quality assurance mechanisms were developed and in existence for the program, 13(65.0%) expressed that the quality assurance mechanisms were not developed and hence did not exist for distance learning. Quality assurance of assessments is another challenge, as UNISA's assessment policy dictates that all assessments should be authentic. This Quality Assurance Framework has been developed in an institutional, national,

regional and international but rapidly changing context. The aim of the framework is to ensure that NCHE and higher education institutions work together to achieve and enhance the quality of higher education. The Quality Assurance Framework comprises of two major components:

a) The regulatory component at the level of the NCHE and
b) The institutional component at each individual university level.

Additionally, the death of ODL quality assurance frameworks (Barasa, 2010) is another of the challenges that the African ODL environment is expected to attend to if the growth of this sub- educational sector is to be sustained. From their studies, (Mayeku, 2011) and (Nyerere, 2012) found that there is lack of a clear and coherent policy for ODL at the national level. Universities are responsible for the quality of their own courses even though the Commission for University Education (CUE) is charged with the responsibility of accrediting all university programmes in Kenya. There are no specific national policy and guidelines for ODL but, realizing the importance of quality in ODL delivery, institutions are putting in place measures to assure quality. Among the various ODL QA strategies implemented by the institutions are a QA policy (40% of the institutions), QA units (26.7% of the institutions) and monitoring and evaluation units (33.3% of the institutions). However, 66% of the respondents observed that there are no adequate QA mechanisms at the national level to guide ODL programmes provision. They felt that the QA strategies are too general and more favourable to residential educational programmes than to the ODL(Nyerere, 2016). Quality assurance in universities provides a basis for training in higher education, implementation and monitoring policies and procedures, and streamlines assessment procedures and standards. It ensures that the general program validation standards and guidelines for internal quality assurance are in place, among others (Dublin Institute of Technology, 2010);

(European University Association, 2007). Specifically, quality assurance systems in universities are supposed to take stock of higher education reforms, identify demands for capacity development, to develop a shared vision within the university and to share experiences on quality assurance principles (Matovu, 2017). In higher education institutions quality assurance systems should not be looked at as an end in themselves but as tools to enhance quality, increase transparency and create trust among stakeholder in higher education (European University Association, 2012); ADC,2009) (UNESCO, 2012). (Matovu, 2017) observed that by practice the effort to enhance quality assurance in most of the Ugandan and East African universities is a new phenomenon which has just been initiated in the regional universities, a decade ago after the creation of the regional quality assurance commissions (IUCEA, NCHE, TCU & CHE) and networks (UUQAF & EAQAN). In an urge of improving quality of education in East Africa, many universities have started to embrace technology in their teaching and learning of students as a means of ensuring the quality of teaching students, and in the management of the institutions (Sife et al., 2007). With the adoption of technology, it is hoped that universities will embrace it in offering open or distance learning so as to take education to regions which do not have universities (Sife et al., 2007); (Matovu, 2012). This is because technology can allow students to access lectures at their homes, and also share resources using the various available e-platforms (Matovu, 2012). According to (Barasa, 2010) the death of ODL quality assurance frameworks is one of the challenges that the African ODL environment is expected to attend to if the growth of this sub-educational sector is to be sustained.

4.4.2 Accreditation of distance learning programs by NCHE.

Respondents were asked whether the programs for distance learning were accredited by NCHE, 20(100.0%) of the respondents were all in agreement that the programs were accredited by NCHE.

Institutional accreditation or permitting institutions to exist and deliver higher education is a key tool of quality assurance. It is a process through which institutions are assessed at various stages before they are licensed.

In processing the applications for accreditation, the NCHE follows the provisions of the (The government of Uganda, 2001), which empowers the NCHE to make regulations to ensure the provision of quality higher education. Accordingly, the NCHE has issued a number of Statutory Instruments. These are: -

a) Statutory Instrument No. 80 of 2005: Establishment and Operation of Private Universities and Private Tertiary Institutions Regulations, 2005.

b) Statutory Instrument No. 85 of 2005: Institutional Standards Regulations, 2005

c) Statutory Instrument No. I of 2007: Naming of Universities, Other Degree Awarding Institutions and Other Tertiary Institutions Regulations, 2007

d) Statutory Instrument No. 61 of 2007: Letter of Interim Authority for Private Universities and Provisional Licenses for Private Other Degree Awarding Institutions Regulations, 2007.

e) Statutory Instrument No. 62 of2007: Equating of Degrees, Diplomas and

f) Statutory Instrument No. 63 of2007: Minimum Entry Requirements for Admission to Universities and Other Tertiary Institutions Regulations, 2007.

4.4.3 Existence of national policy on distance learning.

Respondents were asked whether there was a national policy for distance learning programs, 1(5.0%) of the respondents indicated that the policy was not clear for the program, 16(80.0%) expressed that there was no developed policy program for country 1(5.0%) expressed that the policy is not known by the public 2(10%) responded that they are not sure about the existence of the national policy for the program. In the light of transactional distance theory, (Gokool-Ramdoo, 2009) discussed policy deficit in distance education. He argued that policy deficit in distance education results in transactional distance. At an individual level, a national and institutional policy deficit meant lack of options and awareness among students; while at an institutional level, it poorly affects broader professional opportunities as well as an effective deployment of resources like capacity building, career planning, quality teaching, management, administration, and the development of reward and recognition programs. (Prinsloo and Sharon, 2013) by conducting a directed content analysis of the policy frameworks of two large distance education institutions found out that current policy frameworks of open and distance education do not provide a supporting environment for learning analytics to fulfill its promise. In general, University of Phillipines Open University (UPOU) leaders need to recognize the need for strategic policy development and organizational restructuring for ODeL to be effectively implemented. (Collis and Van der wende, 2002) note that "Policies are crucial for institutions.., to define what will be their next stage of development.., and how to get there" . They recommend in particular that a university intending to implement e-learning "should develop a strategic plan relating to the relative importance to the institution of... different types of learners" and "profile itself around   several instructional alternatives and develop pedagogical models and templates for its course management system that support those models" The higher

education sector does not have agreed upon regulations or rules to create the next generation of academics for this nation. In fact, very few of the universities except Makerere, Mbarara, Bishop Stuart, IUIU, UCU and UMU conducted any basic or postgraduate driven research (see also, (Liang, 2004), (Carrol, 2005), (Sicherman, 2005), (Mamdan, 2007). Almost all universities were teaching institutions. The National Universities Commission observes, however, that a critical appraisal of the scope of the practice of open and distance learning at any level of education in Nigeria against the backdrop of the long-standing recognition of its potential for increasing access to education reveals some mismatch between policy and practice. With respect to open and distance learning education, the national policy specifies that the open and distance learning mode of education shall not be applicable to academic disciplines in a university that lacks capability for such discipline. The need for DE to have clear policies is important for the definition of DE practice. This is because every practice by professional definition must have a clear domain of concern and a philosophical boundary. It is no wonder that judging from all the names by which it is referred, DE is suffering from an identity crisis (Moore et al., 2011) and (King et al., 2001.). Without definite policies for DE, even learner support policies are not able to define their space especially in the supportive use of technology and the internet. While DE sorts out policy issues, its programmes are already up and running. Therefore, students need support structures that will help them maneuver through and succeed in their academic journey. (Brown et al., 2012) and (Thorpe, 2002.) observe that at times, the boundary between learner support and course implementation is unclear because every stage of implementation from course advertisement, recruitment, and academic journey to graduation requires the presence of learner support. (Kanwar et al., 2018.) assert that national-level policies and frameworks can create an enabling environment for innovation adoption, especially for the case of government owned institutions, which rely on government

funding and strategic direction. Studies show that in Cameroon, Kenya and Rwanda there is government support for ODL through national strategies and commitments or related policies. However, all these countries lack a well-structured policy on ODL to guide implementation and there are no independent national bodies to manage DE . This situation is a true reflection of many of African higher education institutions. (Nyerere, 2016) observed that, in Kenya: the absence of a clearly defined national policy poses a challenge in implementation of ODL programs. It creates gaps not only in the provision of common framework for the development of ODL in which institutions should base their policies, but also in resource mobilization for support the implementation of ODL. According to (Mukama, 2016) the absence of national bodies to oversee and manage DE means that implementation of ODL programs becomes fragmented and uneven . In Rwanda for instance, there is lack of an independent body to govern ODL resulting in numerous interventions by different bodies and no coherent approach to implementation. (Ndongfack, 2016) observed that lack of funding is directly related to the policy environment, as without the appropriate frameworks and bodies in pLace, there is little attention being put to the area of DE and no clear mechanism to channel funds.(Biao, 2012), asserts that one of the major challenges to orderly growth of the domain of ODL in Africa is absence of national ODL policies; while many ODL outfits come up and governments authorize and issue them with license to deliver ODL programs and courses, there are no national policies clearly spelling out a path for ODL to run. Where government directives (policy incubation) have been issued for either conventional or non- conventional institutions to run ODL courses, the very operationalization of those programs end up being muffled and contrived by the unenlightened actions of the regulatory agencies.

Students in such DE programmes should have clear procedures of how, when and where to access extra support as needs arise. Students should be aware of how to access learner support. According (King, 2012), universities, which venture into dual-mode never have a mission for DE in the first place. They adopt DE as an adjunct due to prevailing paradigms. Therefore, in dual-mode universities, it is important to institute intentional support and attention to DE students especially in the face of undefined policies. E-learning policy is formulated to guide in the structured utilization of online pedagogical methods in universities so as to make its adoption as systematic as possible. This notwithstanding, most African universities do not have a clearly defined national policy on e-learning, which is impeding the adoption and utilization of e-education in the continent ((Makokha and Mutisya, 2016, Nyerere et al., 2012) argued that the absence of clearly defined national distance education policies in most African countries poses a challenge. Policies are needed to provide a framework for development of distance education. (Ellahi and Zaka, 2015) in the study conducted in Pakistan established that by 2011 DL was established as a project in public sector universities, however, the survey found that there were no fully developed policy documents for the program. The tertiary education sector is not particularly integrated at this point and consequently there are no overarching ICT policies or implementation programs. Typically initiatives are taken on individual institution basis with the ministry and or with the other partners (Farrell., 2007). However, (Kibaji, 2016) maintains that there has been more talk than action towards the establishment of the National Open University of Kenya. Its establishment is long overdue. He further posits that Kenya could follow the example of South Africa regarding the role UNISA plays by providing education to the masses that would not have had the opportunity to gain entrance in a tertiary institution. The South African ICT policies on teaching and learning are considered outdated and fail to provide necessary guidance on the use of mobile technology in

teaching and learning (Vosloo, 2012). As a result, the policies prohibit full utilization of mobile devices as learning tools. (Czerniewicz and Ngugi, 2007) analyzed South African ICT educational policies and they found that the national policies were broad and had no strategies for supporting the use of ICTs in teaching and learning. At the institutional level, the study found that the development of e-learning policies were at different levels. The study concluded that the differences in the development of policies at HEIs are rooted in the national e-learning policies, which are fragmented (Czerniewicz and Ngugi, 2007). The findings are important in this study because existing ICT educational policies inform mobile technology policies. In line with this argument, a study by (Vosloo, 2012) concluded that most ICT policies in education only focused on the provision of hardware, software and networking, whose link to pedagogy, curriculum or assessment was not clear. Hence, UNESCO sees this as a vacuum in the educational ICT policies (UNESCO., 2011) and has pioneered a project for developing mobile policy guidelines that can be adopted by educational institutions. However, such a statement raises a question: What is the relationship between ODL policy aspirations and the implementing authority? (Mukama, 2018). The absence of a clearly defined national ODL policy poses a challenge in implementation of ODL Programmes in the country. It presents gaps not only in the provision of a common framework for the development of ODL in which institutions should anchor their policies, but also in resource mobilizations to support implementation of ODL. National ODL policies would also be instrumental in addressing human resource development and deployment, as well as QA in delivery of the ODL programmes (Nyerere, 2016).

National education policies play a critical role in advancing educational goals of the country because they emphasize the importance of anticipating the future. They are

developed to provide a vision of what the education system should look like in future (Kozma, 2005);

Therefore, education policies, unlike many other government policies are drawn up to support economic growth; promote social development; and advance educational reform (Kozma, 2005); (Nasruddini et al., 2012);

To ensure the sustainability of economic growth, higher education institutions are expected to open up opportunities and provide education to large numbers of people (Altbach et al., 2009); (GEM,2016). The rationale for providing education at this scale is more critical in African countries where there is a huge need for skilled and trained workforce to enhance economic growth and global competitiveness (Rwamatwara, 2012). The findings on education policies in developing countries points towards the use of technology enhanced distance education as important drivers in enabling access to higher education (UNESCO, 2016). The education sector in these three countries is faced with challenges of responding to the increased demand of higher education; insufficient public funding, lack of infrastructure (poorly equipped laboratories and libraries); rigid management structures and curricula that is not responsive to present day needs of the labour market (Beyani, 2013); (Nyangau, 2014); (Odhiambo, 2011). Most public higher education institutions from these countries produce graduates who are ill-equipped to compete effectively in the global economy because they do not have the necessary knowledge, skills and capacity to perform in the knowledge economy (Odhiambo, 2011); (UNESCO, 2016). According to (Makoe, 2018) the national education policy goals of these countries recognized open and distance education models as a feasible way of increasing the number of people studying in higher education sector. Although many countries have not used this delivery method optimally, distance education is not new in Africa. In fact, one of the oldest and the largest distance

institution in the world, the University of South Africa (UNISA), has been successful in providing much needed high-level skills and knowledge to those who could not access full-time education. (Makoe, 2018) observed in the study conducted in Kenya, Rwanda and Zambia that policies recognized the need for ICT in education and open and distance learning in enabling access into higher education. However, they did not adequately provide for the integration of these systems into the national education system of the countries. Unless this model of delivery is integrated into the education system, these countries may not be able to attain their goal for sustainable development and economic growth. (Nyerere, 2016) in the survey conducted in Kenya established that 66% of the respondents who took part in the survey revealed that there were no adequate QA mechanisms at the national level to guide ODL programs provision. They stressed that QA strategies are too general and more favourable to residential educational programs than to ODL. On the integration of sustainable issues to address the needs of the 21st century in ODL programs, 91% of the respondents believed that universities had incorporated sustainable issues in ODL programs. It was not clear how it has been achieved.

4.4.4 Monitoring of distance learning.

Respondents were asked whether there was monitoring for distance learning program, 8(40.0%) of the respondents expressed that there was monitoring of the programs 12(60.0%) expressed that monitoring of the program was still a challenge to NCHE. (Berge, 1998) and (Gellman- Danley and Fetzner, 1998) proposed frameworks for distance education policy that have been reported to provide a useful framework for an investigation of distance education policy. Institutional audits are the core of the institutional quality assurance framework. The NCHE will, at regular intervals, undertake external audits to assess the capacity of institutions for quality

management taking into account their missions, goals, and objectives. The institutions will undertake internal institutional audits and participate in external institutional audits. The main objectives of the institutional and external audits are to:

(a) Encourage higher education providers to cultivate and maintain a culture of continuous performance improvement;

(b) Validate self-evaluation reports;

(c) Enable institutions to develop reliable quality assurance performance indicators to assure stakeholders and the NCHE that the policies, strategies and resources for the delivery of quality higher education are effective;

(d) Provide information to stakeholders on the strengths and weaknesses of the institution;

Enable the NCHE to obtain baseline information through a common set required to undergo internal and external audits. Accordingly, if the mandate is mainly based on planning, formalising or standardising the work of other departments in terms of ODL, then this institution could be more effective if it was managed as a techno structure. This implies that an ODL unit, according to the institutional framework adopted in Rwanda, needs to be endowed with a selective decentralisation, i.e., delegation of decision-making power to operate across all colleges, schools and departments. In practice, this selective decentralisation of ODL units has been impossible since the latter are located in the operating core either at the same horizontal level (e.g., Rwanda Education Board's departments) or just under the level of other units (e.g., the School of ODL vis-à-vis the University of Rwanda's colleges) for which they have the mandate to plan and formalise ODL initiatives. In other words, setting up a strong coordination mechanism of ODL initiatives in Rwanda seems to be one of the priorities to attend to in order to meet the government

aspirations in this area. (Mukama, 2018). It is necessary to impart that Quality Assurance is not a one-time action or set of one time gestures but is the function of constant self-assessment and corrective actions''(Ellahi and Zaka, 2015). According to (Allan et al., 2017) at the policy level certain aspects should be sought in the course of managing distance learning. The aspects were identified basing on Pearson's guide. It was observed that DL&AP policy outlines the minimum requirements that Pearson expect must be met by centers when using Distance Learning and/or Distance Assessment wholly or mainly for the delivery of Pearson qualifications. Quality Assurance (QA) of distance learning, as defined in the DL&AP, is a subset of QA at Pearson with special focus and attention on nine quality categories:

1. Institutional Support;

2. Technology Support;

3. Student Support;

4. Student Engagement;

5. Faculty Support;

6. Teaching and Learning;

7. Course Structure;

8. Course Development;

9. Evaluation and Assessment.

(Abel, 2010) recommended that when carrying out a distance education programme, monitoring and support must be well thought about and established. He noted that during this stage, efforts during planning and initiation become translated into

sustainable programme improvement. One cannot but agree with fact that for every programme to succeed continuous monitoring or supervisory strategies must be put in place so as to see the pros and cons in order to put in corrective measures should if the need be so that the success of the programme will be ensured.

4.4.5 Plan for strengthening distance learning programs.

Respondents were asked whether there was plan for strengthening the distance learning programs, 5(25.0%) expressed that there were no plans in place for strengthening the program, 1(5.0%) were of the views that there were no specific plans agreed to wards the programs, 14(70.0%) expressed that the programs available were general for all not for DL in particular .This study found educational partners to be important contributors to the adoption of e-learning as this is supported by extant literature (Ghana, 2015); (Islam, 2013a); (Hassanzadeh et al., 2012). Educational partners influence in e-learning adoption especially in developing countries is immeasurable.

The active role of educational partners in the implementation of e-learning was highlighted in a mapping report on the state of e-learning in the University of Ghana (Ghana, 2015). At an individual level, a national and institutional policy deficit meant lack of options and awareness among students; while at an institutional level, it poorly affects broader professional opportunities as well as an effective deployment of resources like capacity building, career planning, quality teaching, management, administration, and the development of reward and recognition programs. (Prinsloo and Sharon, 2013) by conducting a directed content analysis of the policy frameworks of two large distance education institutions found that current policy frameworks of open and distance education do not provide a supporting

environment for learning analytics to fulfill its promise. Several studies of Ugandan higher education institutions have shown that our universities do very little research and are therefore merely teaching institutions (Carrol, 2005), (Kasozi, 2003), (Mamdan, 2007). According to (Oladejo, 2014) in their study observed that policy makers and planners should give attention to the following for DL; invest more in DL through increased budgetary allocation, capacity building for using ICT, create partnerships and networking among institutions. (Nyerere, 2016) baseline survey revealed that Approval of ODL programmes by relevant bodies and creation of more awareness of ODL programmes for various stakeholders were the most cited strategies (38.5%) by survey respondents to improve the demand and recognition of ODL programmes. Other strategies cited include provision of accredited ODL programmes, continuous research and development in the area of ODL, and formulation of policies to enhance delivery of ODL both at the national and individual institutions level. With regard to improving the outcomes of ODL students and increasing demand for ODL, respondents cited steps such as incorporation of the 21st-century knowledge skills, improvement of student support services, instilling of practical skills, and increasing of the use of technology interaction. Quality assurance systems should be put in place in all universities to ensure that their students get quality education. With proper university quality assurance systems, universities should highlight proper development needs, trail excellence, teach required skills and knowledge relevant to society, train graduates who are competitive and promote sustainable development and growth by producing graduates who possess adequate knowledge and skills (IUCEA, 2011); (Henard, 2012). According to (Pearson, 2016) eight blended learning program objectives are aligned within the OLC strategic intent to deliver the full requirements of Pearson e-learning programs. For OLC compliance to, their accrediting body, Pearson's

Distance Learning and Assessment Policy (DL&AP) is important for their continued positive reputation and continued quality assurance.

4.4.6 Staff training for distance learning.

Respondents were asked whether there is staff training for distance learning, 4(20.0%) expressed the views that NCHE did not have a policy for staff training for distance learning, 3(15.0%) indicated that there was no policy by NCHE for staff training for distance learning, 13(65.0%) agreed that there was some degree of encouraging institutions in staff training for distance learning. Indeed, changing teachers' pedagogical orientations and approaches requires a broadening of the teachers' awareness of the pedagogic opportunities afforded by learning technologies and the development of their knowledge and skills in online learning design through a professional development program that fosters critical reflection on technology use in teaching and learning (Hughes, 2004); (Daly and Pachler, 2007). In addition, such programs should be holistic and address a complex of factors such as the following: the policy environment (Conole, 2007); (Pachler and Daly, 2011a); institutional support for technology integration (Kirkwood, 2009); (Sharpe et al., 2006); a vision for technology supported teaching and learning (Bates, 2000, Hughes, 2004); teachers' personal and professional use of technology (Becker, 2000); (Russell et al., 2003); teachers' pedagogic orientation and subject subculture (John, 2005); (John and Lavelle, 2004); and membership in a community of practice (John, 2005); (Laurillard, 2011); (Otero et al., 2005). First, training programs for faculty should aim at developing a comprehensive range of ODEL skills in a systematic and coherent way. Teaching online effectively requires more than technology-related skills (e.g., how to use Moodle). Faculty needs skills in content development, learning activities, and teaching. The staff situation in Uganda's

241

universities is not pleasing. As we know, the quality of higher education institutions is determined by the quality of the academic staff. In 2011, Uganda's academic staffs were neither sufficient, nor highly qualified nor distinguished in knowledge production or publications. The development of these skills should be undertaken in such a way that the integration of content, pedagogical, and technological knowledge and skills—that is what (Mishra and Koehler, 2006) refer to as technological pedagogical content knowledge or TPACK—is facilitated. (Arinto, 2013) has a similar view for an ODEL skills framework that addresses this requirement.

Knowledge and wisdom are acquired through observation, experimentation, research and learning. Every university educator must be given the opportunity to improve academically. Therefore, each institution is required to inform the National Council annually of mechanisms it has put in place for each Program. Effective use of DL demands teaching staffs that are properly trained in using DL as a mode of delivery, however, Africa lacks trained cadre of professionals to support the implementation of DL as evidenced in the study conducted in Zimbabwe which indicated that majority of lecturers (97.5%) facilitating ODL did not have the experience in DL (Mpofu et al., 2012a). This is in agreement with the study conducted at Makerere university by (Ezati et al., 2014) on the needs for teaching, findings indicated that the staff who participated in the study their training needs focused around pedagogical content knowledge. It was established that the staff from the four faculties that took part in the workshop did not have an educational background on pedagogy and andragogy training. (Shulman, 1987) observed that both knowledge of content and pedagogical content knowledge constitute the professional base of teaching. It is also important to note that only 59% of the study participants reported strength in content knowledge, an indication that some of the

teaching staff may require support in both content and pedagogical knowledge. This calls for a systematically organized CDP that continuously updates teaching staff knowledge and skills of the teaching staff. Further, it is believed that a teacher with pedagogical content knowledge is able to make informed decisions when selecting instructional content and how such content should be taught to result into learning. From the foregone discussion, several study participants had varying strengths in the mastery of subject matter and were committed to their teaching. However, majority of them lacked pedagogical skills and teaching experience, hence suggesting a weak link between content and pedagogical knowledge. According to (Shulman, 1987) a strong link between content and pedagogical knowledge supports teachers to understand and interpret the curriculum, know the learners and their characteristics, the educational context, the educational purpose and values as essential. Interviews with key university managers involved in academic matters revealed that they lacked adequate capacity to handle e-learning and linked it to its low adoption.

Limited ICT skill was attributed to the fact that majority of the lecturers (55%) were not trained on e-learning and were therefore not competent to handle online courses. This group of lecturers was not even familiar with their university's LMS. Only about 17% of the lecturers had undergone formal training on e-learning (Makokha and Mutisya, 2016). According to the survey done by (Du Vivier, 2016) in Zambia, the findings established that 70% of the public training providers who responded to the survey indicated that lack of knowledge and skills was the biggest challenge they faced while attempting to introduce ODL. This calls for urgent need for capacity building with different categories of staff in these institutions. The survey further established there was concern about the quality of instructors; while many have specific technical qualifications and work experience, they lack the skills required

for effective teaching. Some instructors had not had an opportunity to update their technical skills in line with changing technologies and practice in the work place. The UNESCO working paper series (Dykes, 2012); (Goundar, 2011); (Isaacs et al., 2012) identified the lack of technical expertise in providing mobile centric services as a bottleneck to lecturer readiness. It also identified lecturer readiness as a global problem affecting Africa and Middle East regions (Isaacs et al., 2012), (Traxler, 2014) argued that among many issues that need attention in M-learning, lecturer training takes centre stage. The policies that address the issue of lecturer training are the Tuition policy, the Open distance learning policy and the Curriculum policy. Two of the policies, the Tuition policy and the Open and distance learning policy address the issue of lecturer training in general and do not specify the type of training that a lecturer could receive from the university (CHIPANGURA, 2016). There are also challenges with staff training. (Moore, 1994) recognise that "a good training program for open and distance learning instructors would include: practice in the design, production and presentation of materials; ample hands-on practice with delivery technologies; practice with techniques in how to humanize a course; and practice with techniques for facilitating student participation." None of the study respondents indicated that their staff had been taken through training in all these areas. Very few universities have come up to integrate technology in their teaching methods to improve on the quality of teaching to their students. Universities still think that students should sit in the lecture rooms to take notes from their lecturers as the only way of studying (Matovu, 2017). Teaching staff members need competencies not only for teaching their subject matter but also to innovate and adapt. Teacher competencies are multifaceted amalgamation of knowledge, skills, understanding, values and attitudes, leading to effective performance in teaching (European Union, 2013). According to results of the findings from a study done by (Anjoga et al., 2016) revealed that 28% of the respondents pointed out the need for

capacity building in terms of training on e-Government services, 13% suggested system scalability and 8% pointed out the need counter redundancy strategies for e-Government systems to cater for systems breakdowns, One respondent commented ;"….. many of us in this organization have never been trained on ICT. Therefore, we need training for us to be able to use e-Government services". This situation is spread in most of the sectors where distance education is not an exception and therefore training of staff should be put on the fore front for achieving quality distance education. E-learning initiatives need to be focused on facilitating users to become fully trained and conversant with the ICT environment in order to apply the skills obtained to their teaching and learning processes, a precursor for e-learning adoption and advancement (Kahiigi, 2013). According to (Oroma et al., 2012) many people are not well familiarized in the use and application of ICTs related application of ICTs in day to day activities and hence their knowledge and skills in ICT related work is low compared to those in developed countries. However, their skills come from the use of basic applications and game playing on the computer. There are a number of people who studied certificate in computer applications but due to inaccessibility of computers, their skills have degenerated and need to learn again. While a large number of people are so poor that they cannot afford to take studies in computer since the tuition is much higher than any other study program.

 (Ching, 2016) submits that ICT plays a unique but complementary role in each of these approaches, with new technologies requiring new teacher roles, new pedagogies and new strands to teacher education. The successful integration of ICT depends on the ability of teachers to merge technology with new pedagogies. To achieve this, there is a need for extensive preparation, adequate time, and ongoing support for teachers to ensure they have the knowledge, skills, and confidence in teaching with ICT. The need to provide teacher education programs and professional

development facilities for practicing teachers and pre-service teachers is very critical at this point in time. Effective adoption and utilization of ICT in schools will require skilled teaching staff and supportive leadership. Teachers and institution leaders need to be equipped with knowledge concerning ICT potential in improving teaching and learning. Where this acknowledgement is lacking, policies planned by government and investments towards the implementation of ICT in institutions, frequently fail to realize the reforms and effective integration (Higgins, 2011).

Application of ICTs in day to day activities and hence their knowledge and skills in ICT related work is low compared to those in developed countries. It seems that the investment and planning for training in ICT is regarded an additional cost rather than as an essential prerequisite for transformation of teaching and learning (Amanatidis., 2015,) .

4.4.7 Funds for institutions to run the distance learning programs.

Respondents were asked whether NCHE has provision for funds to institutions that run distance learning program, 1(5.0%) indicated that there was some funding available for the program, 1(5.0%) were of the view that there were no funds available for the program, 18(90.0%) indicated that there were no funds available for the program by NCHE for distance learning program. The resources in terms of financial, human, and infrastructure must all be included. In these policy documents, infrastructure resources have been well defined. However, financial resources' detail is negligible and human resources' detail is not adequate. Of the three constraints of any project management (i.e., time, cost, and quality), cost is one of the important aspects, hence, its details must be included for guiding policy making. Monitoring and evaluation are addressed in the policy documentation; however, a further detail

would further strengthen the guidance of resource allocation. Sustenance of quality higher education, institutional auditors shall carefully examine the following:

The budgeting process: Does it involve all the stakeholders in the institution in order to capture all areas of university activities? Does it follow planning priorities?

Sources of funding: Where does the institution get most of its funding? Auditors must be provided with information on the percentages obtained from:

i.   Government (where applicable).
ii. Fees.
iii. Endowments.
iv. Donors, friends, development partners, etc.

What is the average percentage of the budget received from each major source? Is there an imbalance between the sources of funds? What is the higher education? (c) Assess the percentage distribution of the budget to: -

i.   Academic staff salaries;
ii. Academic inputs;
iii. Library and book banks;
iv. Computer and ICT installations; and
v.   Welfare of students.

Modem universities are supposed to be leaders in the social and economic development of their communities and nations and this raises the question of the relevance of their programs and research. Institutional auditors shall therefore examine the following:

(a) Programs and projects focusing on the community needs and aspirations, the market and general society;

(b) Number and effectiveness of internship programs;

(c) Community participation in university activities; and

Regional collaboration. In their study on policy guidelines for QA in ODL in Kenya, (Mayeku, 2011) found that the following five challenges were common across all the universities that were sampled in terms of ODL delivery: Lack of funds – This mainly was attributed to lack of national policy for ODL hence lack of specific provision in the budget; inadequate resources, mainly resource centres and library resources; Outdated facilities, because many programmes rely on use of print media institutions and had not embraced latest technology; Lack of proper infrastructure and support for ODL which mainly entail lack of necessary ICT and audio-visual equipment, and also inadequate expertise in production of these materials. Another issue affecting delivery of ODL was funding (Huynh et al., 2003); (Nyerere, 2012) observed that most ICT and eLearning-related projects in public universities rely on donor funding, and priority has not been given to ODL in budgetary allocations for universities, but it is key to efficient delivery of ODL

 (Tarus et al., 2015) in their study observed that adequate budgetary allocations are equally critical in supporting e-learning related activities like installation and maintenance of the e-learning platform, training of instructors, e-content development as well as e-learning infrastructure development. On the other hand, students and staff require training in e-learning skills. Induction of students to prepare them to take courses through e-learning as well as sensitization and training of lecturers on e-learning through workshops, seminars and other forms of training are a necessity. (Matovu, 2017) argued that Some of the great challenges which affect higher education institutions in Uganda and the region to achieve the desired quality in higher education; the access to higher education is very low and poor funding to higher education institutions, Many universities in Uganda and the region

lack adequate financial resources to implement functional quality assurance systems and activities. (Materu, 2007); (Asiimwe, 2013); (Kasozi, 2003); (Chacha, 2007) observe that in some universities, the effect of inadequate financial resources has been due to lack of prioritization and allocation of resources to core institutional activities like quality assurance.

4.4.8 Reliable and affordable internet.

Respondents were asked whether the NCHE has provision of securing reliable and affordable internet for the distance learning program, 4(20.0%) were found to agree that NCHE encourages institutions to secure reliable and affordable internet, 3(15.0%) indicated that the internet was expensive and securing it was not easy, 12(60.0%) indicated that there was no support from NCHE in securing reliable and affordable internet for the program. 1(5.0%) indicates that NCIIE did not have a clear mode of support towards securing affordable and reliable internet for the program. Africa, with its many limitations, stands to benefit the most if it is to harness the enormous power of ICT in the sharing of global knowledge and expertise to help support her initiatives in wealth creation and the fight against disease and ignorance. Nonetheless, the continent's utilization of ICT to this end is limited by its under development socio-economically. A promising initiative in this regard is the Bandwidth Consortium, collaboration among 11 universities in Africa, supported by funding totaling US$350 million from four foundations. It is being coordinated by the African Virtual University, and aims to bring expanded bandwidth capacity at reduced cost to participating institutions in this part of the continent.

Providing enhanced connectivity, however, is only one small, albeit crucial, step in a complex process that also requires managing the resource once it is more readily available to larger numbers of users, and ensuring that it is utilized in optimum ways for instruction and other scholarly applications. (Tarus et al., 2015) in their study on

challenges of implementing eLearning in Kenya, found that 92% of the respondents identified inadequate ICT and eLearning infrastructure as one of the challenges hindering the implementation of eLearning in Kenyan public universities. All the respondents agreed that inadequate ICT and eLearning infrastructure were a major challenge in delivering ODL. Furthermore, they found that 85% of the respondents indicated that universities lacked operational policies for implementing and delivering ODL through eLearning. They pointed out that five key respondents believed that lack of operational eLearning policies has hindered successful implementation of eLearning (Tarus et al., 2015). All the key informants interviewed also agreed that computers and other e-learning access devices; network connectivity and Internet bandwidth; and reliable learning management system are important technological components necessary for successful implementation of e-learning. Universities' subscription to the internet services and databases is inadequate; that is, they procure small band width and rarely subscribe to other resources like journals and web-web resources (Basaza et al., 2010); (Echezona, 2010). According to the findings of the study conducted by (Anjoga et al., 2016) revealed 52% of the respondents indicated that connectivity and power shortages (load shedding) as major challenges they faced in utilizing e-Government services, while 23%, 15% and 10% indicated that they were faced with user perception/ attitude in terms of being resistant to change, system failure/ breakdown and high charges and limited infrastructure respectively. The findings further revealed that 51% of the respondents called for improvement in managing and expanding e-Government infrastructure particularly to operationalization and commercialization of the national backbone infrastructure, bandwidth improvement and network availability. One respondent commented about infrastructure;

"The government should complete the internet link from Mombasa as a way of improving internet and reducing costs"(Anjoga et al., 2016, Ndayambaje, 2014) in their study noted that at the institutional level, the imperative is more sensitive. Educational institutional institutions in particular have to equip themselves with all required ICT if they do not want to stay behind in this fast moving world in terms of knowledge, skills and tools. The bandwidth obtained from such subsidies is still not affordable, adequate or sustainable at the university level. In Uganda, the Research and Education Network of Uganda (RENU) a collaboration of public and private higher education institutions, has been established. RENU aims to provide better education and research environments geared towards the development of the country. Among the activities emphasized by RENU is the acquisition of affordable bandwidth and its effective utilization, which is a precursor to enabling education and research environments, including e-learning. To date RENU has persuaded various ICT stakeholders and government agencies to increase Internet connectivity and access at reduced cost. More than 50% Internet bandwidth cost cuts to different member universities have been realized through Uganda Telecom (Kahiigi, 2013). At higher education, computers and Internet are not only educational tools, but also a condition for accreditation and responsiveness to the societal change and growth. That is the reason why (Akande, 2011) argues that once more education has to generate graduates who best fit the 21st century world today.

4.4.9 Qualifications attained through distance learning program.

Respondents were asked whether NCHE recognized qualifications got through distance learning programs, 8(40.0%) responded that NCHE recognized qualifications got through distance learning, 12(60.0%) indicated that NCHE had not yet fully recognized the qualifications got though distance learning especially the ones purely online.). Policy development needs to address policy gaps as well as

"policy tensions" (Hardy, 2008); (Pachler and Daly, 2011b) or conflicting policy pressures arising from incompatible or contradictory policies, procedures, and guidelines, "whether ratified or tacitly agreed" (Masterman and Vogel, 2007).

Scores in students' Grade Point Average (GPA) shall be a result of assigned letter grades as follows:

A B + B CD 54321

First Class A = (4.4-5.0) = 80+

Upper Second B = (4.0-4.3) = 70-79 Lower Second B = (3.0-3.9) 60-69 Pass C = (2.0-2.9) = 50-59

Fail D (0-1.9) = 0 - 49

The second challenge is that of social acceptance of ODL products. There is abundant skepticism as to the quality of graduates produced through the ODL route. In the words of Pityana (2004), in many countries except possibly South Africa which has been practicing distance education at tertiary level since 1946, there is no universal appeal for distance education among the would be learners and suspicions remain about the quality of qualifications acquired through distance education (Pityana, 2004). It is clear, as established by several studies, that universities in Kenya are still faced with myriad challenges in delivering ODL, ranging from lack of clear and adequate national policies, poor perceptions of quality, an elaborate QA system for ODL delivery, and reliance on print materials at the expense of use of modern technology in its delivery. Training in ODL has been found to rely heavily on staff who facilitate the residential mode programs assisted by staff hired on a part time to facilitate the ODL programs (Nyerere, 2012). (Biao, 2012), observed that clearly, there was lack of policy and the quagmire of social skepticism and underrated quality of ODL programs.

4.4.10 General position of NCHE on distance learning program

Respondents were asked about the general position of NCHE on distance learning program, 6(30.0%) indicated that NCHE was more comfortable with the blended mode of delivery for the program, 4(20.0%) doubted the general program of distance learning. 10(50.0%) were found to believe in the program since NCHE accredited the program and since recognized the qualifications got through distance learning. The Sloan Consortium also surveyed university administrators to determine their perceptions regarding the future of online education at their respective institutions.

Overwhelmingly, participants in the study viewed online education initiatives favorably and believed that online education could provide economic, teaching, and learning transformative advantages. Moreover, several million U.S. college/university students have reported enrolling in at least one online course while pursuing their Academic Degree (Allen, 2010). The auditors will measure outputs from the university including, but not limited to, quality of graduates, quality of research and publications and the performance of alumni in the job market. Institution auditors shall examine the following areas in order to determine the quality of outputs of a given university institution (Lansing, 2017):

(a) The period it takes graduates of a given institution to get full employment after graduation;

(b) How graduates are followed up and tracked after completing their studies in a given university should be in place.

(c) Research, publications, patent registration, consultancies and other awards obtained by staff and students of a given university.

(d) The time students take to graduate.

Chapter Five

Conclusions, Findings, Recommendations and Suggestions for Further Studies

5.0 Introduction

This chapter presents conclusions of the research. The results of the study as presented in the analysis and discussions in chapter four above are used here to highlight answers of the research questions and to verify the hypotheses of the study. Based on the conclusions, recommendations for further research were made.

5.1 Summary.

The five universities which participated in this study, the Islamic University in Uganda, Makerere University, Kyambogo University, Kampala International University, and Kampala University apply the dual mode education delivery. The universities developed distance learning programs to supplement the residential mode.

The universities are offering opportunities for learning to both the adults and the working class. Students are required to have a face to face session at their respective centers of study. The examinations are done in those centers and students receive feedback after the semester.

During face to face sessions, lecturers give necessary support to students e.g. encouragement, explanations and giving comments to students.

Based on the findings and discussions of this study, the following conclusions were made and this focused on the lecturers who teach in the program and were part of the respondents for the study. The findings were as follows:

1) The findings from this study revealed that during face to face sessions, a large percentage of respondents agreed that they received support from lecturers. This is a positive move that has encouraged students to register under this program.
2) Tutorials as learners' support system.

The students who participated in the study revealed that majority of them were satisfied with the provision of tutorial support. This helps students to internalize concepts that they may not have understood during face to face or the reading materials provided to them.

The staff are trained and given technical skills of the program.

The findings revealed that the students were satisfied with the technical skills of the lecturers who teach them. This is positive in the sense that the confidence of the students is strengthened.

3) Peer support through discussions and reviews.

The findings revealed that peer support was available to students under the program. The students discussed and exchanged ideas which helped them to improve on their reading and understanding of concepts that they may have missed during the face to face sessions. The administrative factors have influence on the distance learning program.

i. Study materials are provided and delivered to students on time

The findings revealed that the study materials were prepared and delivered to students on   time. This contributes positively to students' learning given the fact they access the materials timely.

ii.   Students adhere to rules and regulations

The findings revealed that majority of the students adhere to the rules and regulations governing the program. This gives time to the students and administrators to make necessary preparations to enable the teaching and learning to take place.

iii.   Students' requests, complaints and complements are received and acted on timely.

The findings of the study revealed that students' voices are heard by the administrators. Majority of the students were satisfied with the way their requests, complaints and complements were handled.

iv.   Requirements for registration are prohibitive.

The findings of the study revealed that the requirements for registration were prohibitive to students. This has an impact on the future development of the program.

Information technology has influence on DL.

i.   Students own computers supplied by the universities.

The findings revealed that majority of the students did not have capacity to own personal computers. It was established that the students were not in position to buy their personal computers due to the limited resources available to them. This impacted on the learning and delivery of information to students by their lecturers and administrators under DL.

ii.   Internet access and affordability by students.

The findings revealed that majority of the students were not happy with the internet availability and affordability. The findings further revealed that the internet services were very expensive. It was also found that in many parts where students stay internet was not readily available. This hampered the students' ability to access information on —line.

iii.   Students access computer laboratories.

The findings revealed that the computer laboratories available are for general use by both traditional programs and distance learning. The laboratories were always competed for by the users hence limiting the access to distance learning students. This impacted on their capacity to acquire the necessary skills for computer application.

iv.   Students possess basic computer knowledge.

The findings revealed that many of the distance learners had the basic computer knowledge, however, they lacked the practice. This was found to be true as those interviewed revealed that they did not afford personal computers and accessing those at the institutions was not easy.

5.2 Conclusions.

From the discussion of the findings, key conclusions were drawn as follows:

1) The study established that during face to face sessions, students received support from their lecturers.

2) Tutorials as learners' support was found to be available for students. This gave a chance to the students to interact with others for learning purposes.

3) The findings also indicated that peer support through discussions was available for students. This was found useful to students as they exchanged ideas among themselves on their areas of study which enriched their learning.

4) Study materials for students were prepared and delivered to students timely. This gave a chance to students to use those materials for their learning.

5) The role of administrators in the distance learning programs was found critical. The administrators manage the students' affairs while on the program. It was established that they managed the students' complaints, complements and requests timely.

6) The universities which took part in the study have registration requirements which are prohibitive for students. The students are required to go through a number of processes in order to register right from the time of application. This posed a challenge to some students who do not have the time given their nature.

7) Majority of the students on distance learning program did not have capacity to own personal computers. This was as a result of limited resources available to them. This impacted on their ability to acquire skills in ICT.

8) It was established that distance learners had a challenge with internet access. The internet was quite expensive for them and in many parts where they lived

it was unavailable. This posed a challenge to the distance learners as they could not access new information posted on the web.

9) It was established that universities that took part in the study had computer laboratories which are used for both traditional and distance learning. This posed a threat to the distance learning students as their ability to access those areas was limited. This also impacted on their skills in computer usage.

5.3 Recommendations

1) The study established that there was no national policy that governs DL in Uganda and that institutions providing these programs were guided by their own policies. The study recommends establishment and implementation of national policy on DL to address among other things, program funding, human resource development, quality assurance and social acceptance of DL products.

2) Technology is very dynamic and universities in Uganda cannot cope with these changes in terms of costs and relevancy yet application of information technology is important in ensuring quality DL. This study thus recommends mobilization of resources by government to establish infrastructures that would support application of technology in the provision of DL.

3) The study established that internet access and affordability were a challenge in the management of DL. The study recommends that government establishes a national grid specifically for educational purposes where institutions would access internet that is cheap for students.

4) ICT infrastructures were found inadequate in the universities that took part in the study. The study recommends that institutions in Uganda with the help of government and other stakeholders get together to mobilize resources to

facilitate the ICT infrastructures which will enable the running of DL efficiently.

5) The study indicated that the registration requirements for students on DL program are prohibitive. The study recommends that measures both national and institutional levels be adjusted to make it easy for students to go through easily. Many of the would-be students get scared away from the program.

6) The study established that the administrators who are engaged with students on DL programs were attending to students' affairs fairly and timely. The study recommends that the administrators be given more training in the management of students' affairs.

7) Lecturers who teach DL students have general skills for teaching. The study recommends that the lecturers who teach students on such programs be given special training in DL. This will enable them to have the necessary skills for handling the students on DL.

8) Study materials are key component in DL. The study established that in some cases materials would be produced and delivered late to students. The study recommends that resources for production of the study materials be provided and timely to enable the lecturers produce the necessary materials for students on time.

9) The study established that students on DL program did not have capacity to own personal computers. This study recommends that the government puts in place a national policy for providing personal computers for students on a small fee or loan basis without interest.

10) Universities should have capacity to establish stand-alone computer laboratories for DL. The study recommends that universities must find funds to establish and equip the computer laboratories for students to access them for gaining skills in computer use. Having computer laboratories for general

use by all students for all programs puts the students on DL program at disadvantage given the fact that they are on and off at the institution.

11)   NCHE should ask government to provide enough funds in support of distance learning in the country. As a body responsible to oversee all academic institutions in the country, it should assist the institutions in securing funds to run DL programs in the country.

5.4. Suggestions for further Research.

1) Further research needs to be carried out in the areas of study materials' development for distance learning in Ugandan universities.

2) Research also needs to be carried out in the management of distance learning programs in Uganda.

3) Research needs to be carried out in the areas of library services as support system for distance learners.

4) A similar study be carried out in other universities and other tertiary institutions that did not participate in this study.

5) A comparative study can be carried out on the management of distance learning in Sudan and Uganda.

5.5 Summary of the Chapter.

This chapter presented the conclusions, findings and recommendations of the study. The conclusions provided answers to the research questions and verified the hypotheses. Also recommendations were offered, suggestions for further research were proposed

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