



THE ROLE OF ACADEMIC LIBRARIES IN SUPPORTING DISTANCE EDUCATION IN KENYA

By

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DECLARATION

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DEDICATION

This work is dedicated to my beloved parents; Mr. Crispus Kilemba Kiti (R.I.P) who knew the value of education and offered me the opportunity despite his financial limits but passed on before I completed this final challenge. My late mother, Mrs. Agnes Mkaluma Kilemba who was a beacon of light in the family and whose wise counsel will live with us forever. I cannot forget my dear wife Rose W. Kilemba who has over the years managed our family almost single handedly due to my frequent travels, working and studying away from home. My children Kennedy, Agnes, Anjella, Crispus, Mathew and Grace Kilemba who have dreams of achieving a lot in their lives and who have continued to be a source of inspiration and hope for me despite the many challenges. My sister Mrs. Mkakisha Musyoka who kept on calling to encourage me; to pray for me and to remind me to go to church every Sunday! Thank you all of you for your patience, encouragement and understanding often in very trying moments. In order for all of us to succeed you have to work very hard but above all pray to God our father in heaven. Most important however remember that you are the one who will make the decisions on who you want to be. Remember your destiny is in your own hands; and taking responsibility for your life is one of the most empowering things you can do.

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ABSTRACT

This study aimed to investigate the role of academic libraries in supporting distance education in Kenya. The challenges which Open and Distance Learning (ODL) students face due to lack of access to library and information services in two universities in Kenya were examined. An overview of the two universities which were purposively selected due to their history of offering distance and part-time programmes namely, the University of Nairobi and Technical University of Mombasa was provided. The study also investigated the current library services in relation to the information needs of distance learners and standards and guidelines and other related statutory documents from the government and the higher education regulator; the Commission for University Education. A mixed methods approach which included both quantitative and qualitative approaches was used. Data was collected through document analysis, interviews and questionnaires.

The results showed that library services initially were planned for all students in the university regardless of their status. While distance learning students had unique information needs the services were planned to serve all registered students. It also emerged that library staff members' work under very difficult circumstances due to staff shortages poorly trained staff, lack of sufficient budgetary allocations and poor ICT infrastructure. The study also revealed that there was little or no co-operation with other academic members of staff, little support from management and that more often than not distance learning programmes were planned with little or no input from librarians. The results also confirmed that there is a high demand for distance and part-time programmes to uplift the social and economic status of workers but while this was a welcome trend universities were not entirely well prepared for this high demand in higher education. The challenges in lack of appropriate educational and research infrastructure were highlighted especially the provision of library and information services and in particular e-resources. The study concluded by offering recommendations that could be accepted as strategies to ensure that open and distance learning students receive the same education in terms of standards and quality of services full-time students receive. The study also proposed a new model that if adopted could go a long way in satisfying the information needs of distance learners. The study also recommended further research in this field given the dearth of literature that assists the topic which was confirmed by some of the literature reviewed.

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LIST OF ACRONYMS AND ABBREVIATIONS

ACDE	African Council of Distance Education
ACRL	Association of College Research Libraries
ADEA	Association of the Department of Education in Africa
ALA	American Library Association
AMREF	African Medical Research Foundation
AR	Academic Registrar
ASC	Adult Studies Centre
BOU	British Open University
CA	Current Awareness
CBD	Central Business District
CEO	Chief Executive Officer
CHE	Commission for Higher Education (Kenya)
CIA	Central Intelligence Agency
CLA	Canadian Library Association
CODL	Centre for Open and Distance Learning
COL	Commonwealth of Learning
COLRIM	Commonwealth of Learning Reviewed and Improved Model
CS	Cabinet Secretary
CSR	Community Social Responsibility
CUE	Commission for University Education (Formerly CHE)
DE	Distance Education
DHE	Distance Higher Education
DL	Distance Learning/Learner
DLC	Distance Learning Community
DLs	Distance Learners
EAC	East African Community
EFA	Education for All
EIFL	Electronic Information for Libraries
EMCs	Extra Mural Centres
EMS	Extra Mural Studies

ET	Educational Training
EU	European Union
GoK	Government of Kenya (Kenya Government)
HE	Higher Education
HELB	Higher Education Loans Board
HR	Human Resources
HoD	Head of Department
ICDE	International Council of Open and Distance Education
ICT	Information and Communication Technology
IGNOU	Indira Gandhi National Open University
ILL	Interlibrary Loan
ISP	Information Seeking Process
ITU	International Communication Union
IUEA	Inter-University Council of East Africa
JAB	Joint Admissions Board (Kenya)
KCSE	Kenya Certificate of Secondary Education
KISE	Kenya Institute of Special Education
KLA	Kenya Library Association
KLISC	Kenya Library and Information Services Consortium
KNLS	Kenya National Library Services
KU	Kenyatta University
LIS	Library and Information Services
LMS	Library Management System
MBA	Master in Business Administration
MDE	Manitoba Department of Education
MDG	Millennium Development Goals
MoE	Ministry of Education
MOOCS	Massive Open and Online Courses
MPUC	Mombasa Polytechnic University College
MRC	Mombasa Republican Council
NACOSTI	National Commission for Science, Technology and Innovation

NARC	National Rainbow Coalition
NGO	Non-Government Organization
ODL	Open and Distance Learning
ODLC	Open and Distance Learning Centre
OECD	Organization for Economic Cooperation and Development
OP	Office of the President/Presidency
OPAC	Online Public Access Catalogue
OU	Open University
OUT	Open University of Tanzania
PhD	Doctor of Philosophy degree
PU	Pwani University
RBL	Resource-based Learning
RBLM	Resource-based Learning Model
RoK	Republic of Kenya
SCL	Student Centered Learning
SDI	Select Dissemination of Information
SMS	Short Message Service
SU	Strathmore University
TUM	Technical University of Mombasa
UK	United Kingdom
UKZN	University of KwaZulu-Natal
UN	United Nations
UNESCO	United Nations Educational Scientific and Cultural Organization
UNISA	University of South Africa
UoN	University of Nairobi
USA	United States of America
UWN	University World News
VC	Vice Chancellor
VUSSC	Virtual University for Small States of the Commonwealth
WB	World Bank
WBT	Web-based Training

WGHE	Working Group on Higher Education
WWW	World Wide Web

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

Provision of library services is an essential part of the learning process at any university community. Academic libraries in institutions of higher education play an important role in providing the main resources for teaching, learning and research for both on and off-campus education (Fahad, 2010:), the benefits of a library and provision of its services to its clients are crucial in attaining excellence in the learning process of the university community. A study by Lindauer (1998) concluded that academic libraries, computers, information technology and staff make a significant difference in the quality and outcomes of learning and teaching.

However, while the importance of the academic library and its resources are essential for effective learning, most universities have played down the importance of library services to the distance learner. This was confirmed by Oladukun (2002b) whose study concluded that library support services are an essential tool and should be given priority before any institution begins any open and distance learning programmes. Hence this study investigated the role of academic libraries in supporting distance education in Kenya; with particular reference to Technical University of Mombasa (TUM) and University of Nairobi (UoN). This introductory chapter will highlight the background and outline the research problem, aims and objectives, significance of the study, limitations and briefly discuss the principle theories upon which the study is constructed. The chapter will also give provide overview of the research methodology, define key terms and concepts, consider ethical issues and conclude with the structure of the thesis.

1.2 Background and outline of research problem

This section provides a brief background to the study and outlines the research problem which study investigated.

1.2.1 Background to the problem

Education in Kenya is a national agenda and the Kenyan Government has stressed this point through its many national development plans, Vision 2030 but more specifically through the

Government of Kenya Task Force Report (Republic of Kenya, 2012) on the re-alignment of the education sector to the new constitution chaired by Professor Douglas Odhiambo. The National Rainbow Coalition (NARC) government which came into power in 2002 supported this agenda by offering free primary and secondary education. Recently the Minister for Higher Education Science and Technology, Mrs. Margaret Kumar, said that reforms were taking place in higher education and noted that more space was needed by 2015 to accommodate children of the free primary and secondary education but also especially the many students who qualified with the minimum of university entry requirements. She urged universities to expand access to meet the growing need for university education and, if possible; to start 24 hour learning programmes so that those who qualified for higher education would not be left out (Kamar, 2012). In 2013 the President of Kenya, Mwai Kibaki, also stressed the importance of education for all. Most families (and individuals) also believe that education is the only way to alleviate poverty. Each Kenyan therefore strives to obtain education at the highest level possible. However, due to stringent entry requirements, the huge number of applications/students who qualify for entry to university, and other reasons (including lack of funds or work related issues), not all who qualify for university gain admittance.

In a paper presented by Agalo (2008) at the African Council for Distance Education (ACDE) Conference and General Assembly in Lagos, Nigeria it was observed that in 2007 a total of 276,239 students sat for the university entrance qualification examination, the Kenya Certificate of Secondary Education (KCSE), of these 82,134 (29.7%) qualified for admission to public universities but only 20,000 (24.4%) were admitted. A larger percentage of those who qualified 75.6% (62,134), did not gain admission. The Government of Kenya (GoK) has recently made great efforts in expanding facilities for university education. Almost all of the middle level constituent colleges and former national polytechnics were up-graded to full status universities. Despite these efforts however, recent figures show that there are still many students who have qualified for university education but who do not get admitted to universities.

In an article by Gilbert Nganga in the University World News (UWN) of 13th September 2012, it was reported that due to space constraints, half of the 118,256 eligible students (meaning those who attained a minimum grade of C+ in school-leaving examinations, which is the minimum

entry requirement for public university admission, 76,000 will not be admitted into Kenya's public universities. This indicates that Kenya's existing universities are finding it increasingly difficult to boost intake due to infrastructural challenges. While admission was up by 20% the year before this means that only 41,000 would secure places in public universities. The balance of 77,256 will be forced to seek further education in the costly private universities or join the equally expensive parallel programmes. A parallel programme in Kenyan parlance is synonymous with distance learning. The Joint Admissions Board (JAB) which selects students to attend public universities increased admissions in 2011 after the creation of constituent colleges. The 87,000 students would therefore have to seek admission through fee charging or parallel degree programmes or opt to join private universities. Questions have occasionally been asked as to why the name parallel degree? A casual check on some of the policy papers did not yield an explicit meaning of a "parallel programme". Indeed one wonders what these degrees are parallel to. Traditionally the estimated 13 private universities in Kenya are only able to admit an estimated 10,000 students annually. Despite upgrading of most or all of the constituent colleges to full status in 2013, this trend is not expected to change the admissions trend significantly.

In view of this; most universities started distance learning (DL) programmes, not only to absorb this readily available market but also to offer an opportunity for those who qualified but did not gain admission to university. On the other hand, the government of Kenya also has encouraged public universities to initiate income-generating programmes to supplement the meager resources granted by the government. In addition to this, are applications from working professionals and individuals who are keen to pursue higher education either for promotion or to strategically position themselves for new job opportunities.

Inevitably some terms for the non-traditional (off-campus) student programmes such as parallel, evening, weekend and school-based began to surface. There have been suggestions that all these categories of students (off-campus) are distance learners (DLs) since they do not conform to the typical definition of the traditional full-time or on-campus student. With the increased popularity of distance learning education, much attention internationally is being focused on the role of libraries in supporting distance learners, among other things especially for not on-campus. However, questions are also being asked as to whether libraries have a role in distance education

at all (Lombardi, 2000). Inevitably this brings into focus the involvement of librarians in supporting the practices, procedures and complexities of delivering courses in the distance learning mode. While the relationship between DLs and libraries appears to have been a matter of concern for many deputy university librarians, it is slowly becoming an important issue for course providers (Unwin and Bolton, 1998).

As most universities in Kenya have started open and distance learning (ODL) courses, it has been observed that most of these students have no access to the main campus libraries. It has also been argued that librarians have not been involved as much as they should have been in the initial planning of these programmes; and that an approach to distance education which ignores the role of libraries in the first place, provides a narrow experience for the learners and fails to encourage the expected research-led inquiry as well as the development and challenging of existing knowledge (Holmberg, 1998). Without access to libraries as a vital research infrastructure, it can easily be concluded that learning, continued assessment projects and theses of distance learning students will not be as good as those of on-campus (internal) students who have (full) access to modern libraries equipped with e-resources and staffed by professional librarians. This study seeks to determine the role played by libraries in supporting distance education learners in universities in Kenya using two universities as case studies. It aims to address the issues of access, user education programmes, e-resources, e-learning and information needs and seeking behaviours of distance learning students, amongst others. Background information of the two institutions that will be investigated namely; Technical University of Mombasa and the University of Nairobi, will also be provided in Chapter Three.

1.3The research problem

The research problem is essentially the topic to be investigated or what needs to be known. It is assumed that a researcher conduct a study because the researcher has identified some problem worthy of investigation (Hoskins, 2010). In the developed world, the library and information service guidelines prepared are strictly adhered to by institutions that offer distance learning programmes. This consensus is the reason why Appleton (1997) suggests that access to quality library resources is a critical factor in any academic programme of merit. At the same time, in Kenya the Commission for Higher Education (CHE) now known as the Commission for

University Education (CUE) through its new Standards and Guidelines (2012) has affirmed that library support should be an integral part for all students regardless of whether on-campus or off-campus. It is questionable if this is really being put into practice in Kenya. The reason for this is because the new Kenyan Education Act (Republic of Kenya, 2013) only came into being in 2012 and so therefore the previous situation still prevails. This is confirmed by a study conducted by Wasike and Munene (2012) where they confirmed that university libraries in Kenya have not achieved much in carrying out user studies for non-traditional students (meaning those not in full-time courses) to establish their characteristics, information needs and information-seeking behaviours.

On the other hand, in the developed world professional associations such as the American Library Association (ALA) and the Canadian Library Association (CLA), have offered benchmarks and guidelines to institutions planning to offer distance learning. According to the Association of College and Research Libraries (ACRL), library and information resources must be provided to meet the needs of distance learners on an equitable basis with their own campus colleagues (ACRL, 2004). This is not the situation in the developing world, including Kenya. A close look at the literature revealed that while there have been many workshops and conferences on guidelines and procedures to be followed by universities offering or planning to offer distance learning in the developed world, very little has been done in Africa to date (including Kenya). It has also been observed that funding for libraries is not only scarce but also (even when it is allocated), it is the first department (library) which university managers target whenever there is a need to re-allocate or transfer funds to other “vital” departments of the University.

However, perhaps the most challenging issue is to ensure that library services offered to the distance learning community are planned in such a way that they can effectively meet a wide range of information and user needs. This challenge is also confirmed by Kavulya (2004) who argued that the most challenging issue in Kenya is not only that library services should effectively meet a wide range of user needs but that there is also need for reliable, rapid and secure access to institutional and other databases, including print and internet-based resources. In the same study it was recommended that in view of limited user education for distance learning students, which does not prepare them well for their academic work, there is need for

collaboration between lecturers and librarians not only in promoting user education but also in pre-planning distance education for distance learning programmes.

Wasike and Munene (2012) also observed that librarians are duty bound to assess the existing library support services for non-traditional modes of learning, its availability, appropriateness and effectiveness. A close look at existing information on collection, development and acquisitions policies currently do not reflect the profile needs of non-traditional students. This study concluded that universities should embrace the non-traditional and or distance learning students' information needs and study behaviours just as much as they do for the traditional (on-campus students) to avoid what has now come to be known as academic discrimination. The research problem investigated was therefore the lack of provision of library services for distance learners to adequately satisfy their information needs and thus improve the quality and outcomes of their learning.

1.3.1 The purpose and objectives of the study

This section provided the main objectives and motivation for the study; given that hitherto the traditional library system has always favoured full-time students. The main objective of the study was to look at the library and information needs of distance and remote learners, how their needs are met, and also examine their information seeking behaviours and the resources which they use to obtain information and, in the process, the challenges that they meet. One of the outcomes of this study is the development of a model or framework to be used by libraries in universities offering distance learning in Kenya. Specifically, the objectives of the study have been:

1. To determine the information needs of distance learners in Kenya.
2. To assess how the information needs of distance learners in Kenya are met by the libraries.
3. To develop a model framework for provision of library and information services for distance learners in Kenyan universities.

1.3.2 Key research questions

In line with the purpose and objectives of the study which is to investigate the role of academic libraries in supporting distance education in Kenya, the study attempted to answer the following questions:

1. **What were the information needs of distance learners at the universities?** The purpose of this question was to find out what kind of information distance learners require in order to meet their needs, identify the gaps and address them accordingly.
2. **What library services were offered to distance learners at the universities?** For this question, the researcher sought to find out if the resources and services available met the needs of distance learners adequately and whether there are any services or librarians dedicated to distance learners.
3. **What support did distance learners receive in terms of user-education or orientation?** This question addressed the issues of information literacy and skills needed to fully equip distance learners so that they could fully exploit all the available resources.
4. **What challenges did distance learner's face in accessing library services and resources?** This question solicited data on the barriers, obstacles, hindrances and any other problems that distance learners encounter in their search/quest for information.
5. **What strategies can be adopted to overcome the challenges?** The question ought to address the intervention process that can be adopted to overcome the challenges, including the development of a new model for distance learners information needs.

1.3.3 Justification and significance of the study

A review of related literature shows that some attempts have been made in the past to investigate the role of the academic library in supporting distance education. However these studies have not offered any real solutions or have not been as comprehensive which regard to solving the challenges. As Kavulya (2004) observed in his study, it is evident that the issues have not been addressed adequately. He went on to observe that there is a dearth of literature on the subject of library services for distance learners in Kenya, and that scholars and librarians have not given much attention to the subject, although there is a recognition that an adequate supply of library services to distance learners is critical to the success of the distance learning programmes in the

country. Studies in other parts of Africa (Oladukun, 2002b) have revealed that except for a small group of university libraries, library support service for distance learners are almost non-existent.

This study therefore will not only help to fill gaps in research on this topic and improve current distance learning systems, also benefit and offer an insight into library services for distance learning in Kenya but and also in other parts of Africa. The study will also highlight the barriers and obstacles which distance learners face in obtaining information for their studies. In addition, the study will attempt to provide solutions to ongoing problems and challenges in distance learning programmes in regard to library and information services. It will provide guidelines, standards and recommendations that can be used to promote the provision of library and information services for teaching and learning for distance learners. It is envisaged that the study will initiate e-learning and other information centers dedicated to distance learning in the country. Findings obtained from this study will assist academic librarians not only to better understand distance learners' needs and problems but also promote librarians dedicated to distance learning in their respective libraries.

Answers to the questions posed in this research will also assist university authorities in their strategic planning in teaching, learning and research not only for on-campus students but also for distance learners. The findings should also assist academic library professionals, university administrators and other stakeholders to better understand the needs, problems and challenges in the delivery of library services to distance learners.

1.3.4 Scope and delimitations of the study

Since most or all Kenyan universities run similar programmes and face similar challenges in regard to distance learners information needs it was therefore decided to study/investigate two universities, namely the newly upgraded Technical University of Mombasa and the University of Nairobi. The University of Nairobi which has been implementing distance learning programmes for many years has its own Open and Distance Learning Centre (ODLC) which offers programmes up to Doctor of Philosophy (PhD) level. The study focused only on postgraduate students who would normally have had more exposure in project writing, research and information challenges. This limited the number of respondents. The study was also limited to

professional subject librarians and deputy university librarians or directors as designated in some universities. Due to the busy work schedule of the university librarians they were unavailable to be interviewed. Therefore the deputy university librarians were interviewed.

1.4 Definition of key terms and concepts

This section provides a definition of key terms and concepts used in this study. This is intended to provide an understanding of the issues discussed (Lawal, 2012) with respect to concepts related to distance learners and their information needs, and other terms which could impact on the current study.

1.4.1 Access

According to Anyona (2009:16), access in the context of that study is the availability of university education for all those eligible and who meet the desired criteria of admission to receive university education in Kenya. Anyona's study also defines access as the availability to and use of information resources including linkages, to resources, collections and human resources most appropriate to its users as well as guidance and promotion to stimulate use of these services. Reitz (2007:5) has a short and precise definition of access as the "right of entry to a library or its collections".

1.4.2 Distance education

The word 'distance' according to the Oxford English Dictionary (2007:337) means "condition of being far off or remoteness". The term is also a connotation for 'separation'. The term 'distance education' could therefore imply the form of study where there is the element of separation between the learner and the teacher. However, it should also be stated that there has been some disagreement in the literature (Kember, 2007) on distance education. Distance education is therefore a form of study whereby the learner and tutor are separated by geographical distance (Boadi and Letsolo 2004). Maenzanise (2002) citing Perraton and Creed (2000) has defined distance education as a process in which a significant proportion of teaching is conducted by someone removed by space and or time from the learner. Another author, Kember (2007), has a similar definition which is that of an educational process in which a significant proportion of the teaching is conducted by someone removed in space and or time from the learner.

1.4.3 Distance learners

Distance learners are students in institutions where the instructor and the student are at a distance from each other and are also removed by distance from each other from centers of learning. They are referred to interchangeably as off-campus students or non-traditional students. This study prefers to define distance learners as those usually at home or in their places of work taught by means of correspondence rather than face-to-face. This teaching often happens through tutors who may be involved to give written advice or mark written work, either at a distance or through occasional meetings (Crystal, 2004:461). These students are usually not in the normal mainstream of learning and attend lectures at odd hours or days usually when offices and libraries are closed or partially operating.

1.4.4 Open learning

The term open learning has been described as a wide range of learning opportunities to assist learners in gaining access to knowledge and skills which they would otherwise have been denied; and to give the learners the degree of control over their own learning. Open learning is based on an education philosophy that gives consideration to learners' choices of, among other things place and pace of study and the option of which media to use. Anyona (2009:16) defines open learning as an attempt to remove barriers associated with residential university education in terms of admission requirements, pace, place, time of study, mode of delivery assessment and examination process.

1.4.5 On-campus students

These are full-time students found in conventional institutions with a direct interaction between students and their lecturers/tutors in a lecture room setting (Maenzanise, 2002). Sometimes they are referred to as resident students, full-time or traditional students.

1.4.6 Part-time

In terms of this study 'part-time' denotes working or attending school less than the usual or full-time (Webster's College Dictionary, 2010) In the Kenyan context, part-time students have varied needs of learning (Agalo, 2008). These are needs which cannot be satisfied through the conventional face-to-face approaches to education provision. Due to a variety of reasons such as

job demands, finances, time, and distance, these students pursue learning at a distance; sometimes attending in the evening, weekends or when the other traditional students are away on vacation.

1.4.7 Information

According to Maenzanise (2002:63), a definition of this concept has tended to be highly elusive. In his study, Maenzanise defined information as a collection of data that is capable of being communicated in various formats such as text on paper or stored on electronic formats as structured text or ordinary text, images, graphics, audio and video formats. This study adopted the definition offered by Reitz (2007:355) in which information is defined as “data presented in a readily comprehensive form to which meaning has been attributed within the context of its use”. In simple terms, this means a message conveyed by use of a medium of communication or expression.

1.4.8 Information need

Information needs of users should be viewed and understood from the perspective of the individual seeker. A pragmatic definition therefore could be adopted from Maenzanise (2002); citing Chen and Hernon (1982), as:

“Arises(ing) whenever individuals find themselves in a situation requiring such knowledge to deal with the situation as they see it. Such information needs arise in all aspects of everyday life: the home, the office, in relations with family or friends or the insurance company, out of idle curiosity or as a requirement of work”.

Information could therefore be understood in relation to the situation in which the individual who perceived that need created the information. This study preferred the definition by Reitz (2007) where it was stated that an information need is as a “gap in a person’s knowledge that gives a rise to a search”. This urgent need leads a person to pursue a search with diligence until the desire is fulfilled.

1.4.9 Information seeking behaviour

This is the purposive seeking for information as a consequence of a need to satisfy some goal in the course of seeking for information systems (such as a newspaper or a library), or with computerized systems such as the World Wide Web (WWW) (Wilson, 2000). Other, relevant and popular terms that will be used for this study ‘include information seeking strategies’ and the ‘information search process’ (ISP) of Kuhlthau (1993).

1.4.10 Provision of library services

In a recent study, Majinge (2014:18) citing Prythech (2000) stated that library services are facilities provided by a library for the use of books and the dissemination of information. Wachira (2013:21) referred to these services as all the activities put in place to ensure accessibility and use of library services and resources to (remote) users. The concept also refers to all activities that guarantee availability and access to information resources. This includes linkages to resources, collections and human resources most appropriate to its users, such as user guidance and promotion to stimulate use of resources.

1.4.11 Flexible learning

Flexible learning is defined for the provision of education and training that can be accessed at any place and time. According to Chen and Hernon (1982), a commonly accepted definition of ‘flexible learning’ is when the students are provided with flexible access to learning experiences in terms of time, place, pace, learning style, content, assessment, and pathways among others.

1.4.12 E-learning, V-learning (virtual learning) and Online learning

These are e-learning systems that use electronic mediums, such as; computers, television, cable, internet, mobile and many other similar mediums. Other terms that have emerged to describe the application of information and communication technologies (ICTs) include e-class, e-test, e-library, e-books and e-journals.

1.4.13 Academic library

An academic library is a building containing relevant reading materials which students and staff can consult. Accordingly, libraries in tertiary institutions serve the information and research

needs of both the staff and the students. The library therefore is an essential department in the institution because it is vital to the learning process of its users. According to Reitz (2007:4); an academic library is an integral part of a college or university or any other institution of post-secondary education which meets the information needs of its students, faculty and staff. Ideally, libraries play roles in the education process far beyond the provision of books and other materials. They provide much more in terms of internet facilities, research support, recreational and cultural needs to users, among others.

1.4.14 User education

According to Lwehabura and Stillwell (2007), the concept of user education as it is used in the library profession is rather confusing mainly because it is used interchangeably with other terms such as 'library instruction', 'user instruction' and 'reader education', among others. However, the common denominator among these terms is a reference to organized programmes practiced across libraries to enable library users to acquire skills to allow them to use the library competently. Likewise Behrens (1993) defined 'user education' as training as a result of which a library user or client is educated to become competent in using a specific library.

1.5 Theoretical framework

Research has often been described as a systematic investigation through which data is collected, analyzed and interpreted in some way in order to understand, describe predict or control an educational phenomenon (Mertens, 2005). Indeed; what was relatively simple to define many years ago has become far more complex in modern times, as the number of research paradigms and models have increased; not only to the social sciences, but also in library and information science. Due to the variety in research questions being asked, not only have different research paradigms emerged in library and information science but the use of models has also become the norm rather than the exception. This has resulted in the development of theoretical frameworks as roadmaps to social science as well as in library and information sciences.

A theoretical framework as distinct from theory sometimes is referred to as the paradigm (Mackenzie, 2006). It influences the way in which knowledge is studied and interpreted; and is the choice of a paradigm that sets down the intent, motivation and expectations for the research.

A theoretical frame guides the research design, methodology, methods and literature. Models typically focus on more limited problems than theories. According to Case, (2012) models precede the development of a theory which is often the reason why they are discussed before theories. Models are sometimes used simultaneously with simulation and can assist in the development of a theory or paradigm. According to Connaway and Powell (2010), a model is an abstraction or mental framework for analysis or a system which involves the use of simplified representations of real world phenomenon. For example, models can be used to demonstrate or determine a real system such as an interlibrary loan or information-seeking pattern. In a study by Kebede (2002) it was observed that models are constructed to better understand or gain a new insight into a phenomenon and that a model is a representation of reality for a given purpose or set of assumptions about the world.

The current study deals with the information needs and information-seeking behaviour of distance learners on one hand; and also the challenges which they face given that they are not resident on-campus. Distance learners therefore spend a lot of time studying on their own. This requires a very high sense of self discipline. In view of the foregoing; the study was conducted within the postpositivism paradigm guided by the Wilson (1996) model of information- seeking behaviour and the Resource-based Learning Model (RBLM).

According to Case (2012), Wilson's models have gone through a series of transformation beginning with the first one in 1981 to the latest one in 1999. Mnubi-Mchombu (2013:15) has stated that Wilson's models basically consists of 12 components. These components are the information user, need satisfaction or dissatisfaction, information use, information behaviour, information sources, success or failure, information transfer and information exchange among others. Wilson's 1996 model preferred for this study is a major revision based on research from various fields other than information science. It is based on two basic assumptions. The first one is that information need is not really a primary need but a need which arises out of other basic needs, for instance work, life, and the internal or external environment. The second one is that in the process of searching for information to satisfy a need, the information seeker is likely to encounter different barriers and challenges which can lead to success or failure.

In his study, Simba (2014:11) stated that RBLM is a concept that is used to denote learning in which learners develop knowledge, skills and understanding by using a wide variety of print, non-print and human resources. Citing Hill and Hannafin (2001) Simba defined RBL as the use and application of available assets to support varied learning needs across contexts which underscores individual learning that greatly depends on resources. This is what makes RBL suitable for distance learners who spend most of their learning alone; and away from campuses and libraries.

1.6 Preliminary literature review

A literature review is indispensable in research. According to Kaniki (2002), research does not exist in isolation. It is built upon what has been done previously and advises that a researcher should review previous works in the field before undertaking any research project. This is meant to deepen the understanding of the problem under research and explore other significant issues in previous studies. Fink (2009:3) defined a literature review as a “systematic, explicit and reproducible method of identifying, evaluating and synthesizing the existing body of completed and recorded works of researchers, scholars and practitioners.” The review involved an examination of all types of documents, published and unpublished; these included books, reports, theses, and dissertations and journal articles (both in print and electronic format). The review was organized according to studies covering concepts, definitions and benefits of distance learning, provision of library and information services to distance learners given their unique needs, user education, and the role of ICTs in delivery to distance learners. In addition current management practices were investigated to discern challenges. The literature review is discussed in detail in Chapter Three.

1.7 Research methodology and methods

The study used a mixed methods approach as Ngulube (2010) has observed that using a mixed methods approach increases overall confidence in the findings of the study. It also helps address the intricate social challenges that cannot be handled efficiently through a single method approach. Both quantitative and qualitative methods, often referred to as the triangulation method were applied, and an analysis involving an in-depth multiple case study research of the Technical University of Mombasa and University of Nairobi was completed. In order to obtain

good measurement procedures of reliability and validity, two data collection methods were applied, namely self-administered questionnaires and semi-structured interviews. The target population was postgraduate and postgraduate diploma distance learning students, deputy university librarians and subject librarians.

In order to describe the variables data was collected and analyzed using descriptive statistics supported by the SPSS computer assisted data analysis software. Qualitative data was analyzed using thematic content analysis. The data was then presented using figures, tables and graphs. The research methods and procedures are discussed further in detail in Chapter Four.

1.8 Ethical considerations

All professions are guided by a code of ethics (Kumar 2011:241). Ethics can be a set of moral obligations and principles which are agreed upon by individuals, groups or societies and which are accepted by all types of disciplines. Likewise in social sciences; this is a very important issue and must be observed with a very high sense of moral obligation (Simba, 2014). Towards this end, the researcher observed all the ethical procedures in accordance with the University of KwaZulu-Natal's ethics-policy (<http://research.ukzn.ac.za/EthicsPolicy12111.aspx>).

In addition permission was sought from the Kenya Government to carry out research in the country which was granted. Approval and permission was also granted by Technical University of Mombasa and University of Nairobi to carry out research at these institutions. All respondents were informed of the purpose and procedures of the study before data collection started. All the questionnaires, letters of consent and any other related documents included information on the purpose of the research. Participants were also informed that participation was voluntary and that confidentiality and anonymity was guaranteed. Findings and interpretations were presented honestly and all sources of information were cited and referenced accordingly.

1.9 Structure of the study

This section offers the organization and structure of the study. The study is divided into seven chapters which are as follows:

Chapter One

Chapter One provides an introduction to the background of the study, outline of the research problem, purpose, research questions, justification, significance, scope and limitations. The chapter also defines the key terms and concepts, among other things.

Chapter Two

Chapter Two provides the theoretical framework upon which the research was grounded and provided a brief explanation of the postpositivism paradigm; Wilson's (1996) model of information-seeking behaviour and Resource-based Learning Models (Manitoba Department of Education, 1994) which were preferred for the study.

Chapter Three

This chapter discussed, and reviewed, the relevant documents and literature related to the study, the research problem and research questions under the ambit of distance learning and the information environment.

Chapter Four

Chapter Four discusses the methodology and methods applied in order to obtain good measurement procedures, reliability and validity and also considers ethical issues.

Chapter Five

Presents the results of the study in terms of figures, tables and graphs and also provides a summary of the results analysis.

Chapter Six

This chapter presents a discussion of the findings as a consequence of the analysis of the data presented in Chapter Five in relation to the research problem and research questions.

Chapter Seven

The final chapter provides a summary of the research findings, conclusions and recommendations and offers suggestions for further research. All appendices and references are situated at the end of the thesis.

1.10 Summary of the chapter

This introductory chapter provided an overview of the research journey. It provided an introduction to the research problem, statement of the problem, purpose, scope, limitations and also defined key terms and concepts. The theoretical approach, methodology and methods for data collection, ethical considerations and a summary of all the chapters were also provided.

CHAPTER TWO

CONCEPTUAL FRAMEWORK

2.1 Introduction

This chapter provides the framework and models upon which the research has been grounded. A theoretical framework is important in a research journey because it helps the researcher to construct the study and not only to make meaning of the subsequent findings but also to invite conclusions. It is usually the starting point of research since it puts the research in its proper context and guides the researcher to form opinions and conclusions. This section will present the framework that was adapted for the study as well as the models that guided the study.

2.2 Theoretical framework and models

According to Hesse-Biber (2010), a researcher's perspective is critical in building a mixed methods design and may sometimes be clearly stated in the research, although this is not always the case. In a study by Zinn (2012), theory was defined as a correlation of assumptions and principals put forward to explain a precise set of phenomena. This was further explained as being the basic meaning of theory to develop an understanding or explanation of some phenomenon. In a study by Majinge (2014), it was observed that theoretical framework is an orientation to the study and makes research findings meaningful. Citing Cresswell (2009:51), Majinge (2014:40) defined theory as interrelated sets of constructs or variables formed as hypotheses, assumptions or propositions that specify the relationship among the variables. In the same study, it was further argued that theory may be viewed as a process which orders concepts in a way that offers insights and understanding. In a very simple and uncomplicated way, theory provides people in general (and researchers in particular) with an explanation to make sense of complex practices, procedures and phenomena and provides an alternative that reduces the complexity.

Indeed, there seems to be no clear distinction between a theoretical and conceptual framework in research. A study by Nsibirwa (2012:35) observed that "a conceptual framework is an effective tool to structure research and assist the researcher to make meaning to subsequent meanings". Another view in a study by Smyth (2004) emphasized that a framework is usually intended as a starting point of reflection about the study and its context. On the other hand, it has been argued

that the theoretical framework as distinct from theory is sometimes referred to as a paradigm. Mackenzie (2006) stated that it is the choice of the paradigm that sets down the motivation, intention and expectations for a study. In other words, without selecting a paradigm as the first step to a study, there is no basis for subsequent choices in terms of methodology and methods or even literature review and research design. This can be construed to mean that a paradigm is the lens which guides the research process and ideally is the starting point of the whole process. On the other hand, models assist in the development of a theory although more often than not it can be argued that there is no clear distinction between a theory and a model.

2.2.1 The mixed methods approach to studies

The study is about the role of academic libraries in supporting distance learning in Kenyan universities. It also aims to offer suggestions on how these academic libraries can provide effective and useful information services to distance learners that are at least equal to those provided to full-time or campus students; that is the traditional student. As far back as 2004, studies already established that there was a dearth of literature on the subject (Kavulya, 2004). A recent literature search (2015), also did not yield substantive information which shows that not much has changed regarding the Kenyan situation. It can therefore be safely assumed that there are currently not many comprehensive studies on the subject. This is one of the reasons behind the motivation of this current study and hence the preference for both quantitative and qualitative methods of approach in order to collect in-depth information and data required. According to Moore (2006), while quantitative research aims to show what is happening, qualitative-oriented studies inform why it is happening and develops an understanding of individuals' views, attitudes and behaviour.

In qualitative research, meaning is often assumed to be personal and subjective often understood through social interaction, personal histories and experiences, and as a result, this knowledge is inherently localized (Wheldon and Ahelberg, 2012). Qualitative researchers ideally focus on gathering, analyzing and presenting descriptive or narrative information based on the desire to describe real life. In other words, qualitative researchers gather information from human beings in a natural and real life situation aimed at revealing unknown or unexpected understandings.

This is usually done by an in depth analysis of the data on multiple levels, hence the preferred use of sound recordings, focus groups and interviews among others as data-gathering tools.

It has been stated that the differences between qualitative and quantitative research are overblown and that most research contains both elements (Wheldon, 2012:39). It is therefore important to try and understand the distinction between the two. Quantitative research as mentioned already tries to answer the question ‘what?’ by measuring characteristics of individuals, groups, countries and so forth. The focus is usually in gathering, analyzing, interpreting and presenting numeric information or quantities (own). The data can be gathered using pre-testing or post-testing scores, questionnaires or amounts of time it took to complete certain activities. However, several studies have affirmed that both qualitative and quantitative studies can contribute to this type of research.

Majinge (2014) used both qualitative and quantitative research methods in her study because the study was similar to the current study’s approach and required a combination of both approaches in soliciting and analyzing data. In the same study it was stated that quantitative research performed with a theoretical framework is when the previous theory is used as a basis for generating predictions that can be tested. In other words, the researcher advances a theory or concept, collects data to test it and reflects on its confirmation or non-confirmation by the results, and thereafter, that theory or concept becomes the framework of the entire study (Majinge, 2014:41). It has also been stated that quantitative research focuses on postpositivism and assumptions about meaning; and uses concepts that are especially useful for research problems that are based on certain quantifiable assumptions about knowledge. However, Wheldon (2012:80) has also stated that in principle qualitative research can also use the same concepts; hence the mixed methods research approach.

2.3 Paradigm and models

In research, both paradigms and models are indispensable and sometimes it is not easy to differentiate between these. While paradigms can be used by researchers to develop theories and concepts, models usually presented in the form of diagrams make it easier to understand paradigms especially, for those who are new to the topic or new researchers. Paradigms can also

be used to develop theories. However, as Connaway and Powell (2010:79) affirmed, a model is an abstraction or a mental framework for analyzing a system typically used to determine the performance of the system, for instance in an interlibrary loan (ILL) process or in the ordering of materials for library processing and putting these materials in stock.

2.3.1 Paradigms

It has been argued that research which is often described as a systematic investigation has had phenomenal growth. That which was relatively simple to define thirty or forty years ago, it is no longer that simple today with the number of research methods increasing dramatically in the social sciences (Mackenzie 2006). While this is true in the applied and social sciences, library science has not been left behind. Inevitably this has also brought in a plethora of paradigms. This is significant because, as has already been mentioned, the choice of a paradigm sets down not only the motivation but also the intention and expectations of the study. In this connection the definition of the term paradigm is crucial. A basic definition is offered by Teddlie and Tashakkori (2009:20), citing Mertens (2005:139) who defined a paradigm as a “world view complete with the assumptions that are associated with that view”. This definition seems to resonate well with several other views, including that of Morgan (2007) who also referred to paradigms as systems of beliefs and practices that influence how researchers select questions for their studies and the methods they use to deal with these questions. Another definition is that offered by Mackenzie (2006) who defined paradigm as a loose collection of logically related assumptions, concepts and propositions that orient thinking which in its simplest form means a set of assumptions from which a theory can be developed. A paradigm usually contains three basic areas, namely; the belief about the nature of knowledge, the criteria for validity, and the methodology. A paradigm is also about the philosophical intent or motivation for undertaking a study.

This study is about distance learners whose needs are unique; and, where attempts have been made, the services provided may not be adequate. In most cases such students may not have access to quality library services, and yet this is a critical factor in any academic programme of merit or desiring recognition. This was confirmed by Wasike and Munene (2012) who argued that university libraries in Kenya have not achieved much in carrying out user studies for non-

traditional students (meaning those not in full-time courses) to establish their characteristics, information needs and information-seeking behaviours. This is despite the fact that many studies (especially globally) confirmed that distance learners have unique information needs that need special and urgent attention.

There are many paradigms and models which have been used for research on the information-seeking needs and behaviours of tertiary students. Some of these frameworks include constructivism, interpretivism, behaviourism, pragmatism and positivism. Recent studies however have preferred to use the postpositivism research approach which advocates methodological pluralism (Wildemuth, 1993). The reason being given for this development is that different research paradigms have emerged in the research questions being asked in the social sciences, including Library and Information Science (LIS). The use of models is also increasingly being used more than before. In the process, various paradigms have emerged which can be applied in LIS research. Some of the paradigms that have been used in this type of study include; but are not limited to; the following:

Constructivism: A study by Munyua and Stilwell, (2012) defined the constructivism paradigm as often combined with interpretivism as a theory about learning and knowledge. It is based on the ontological assumptions that there is no objective reality but rather what we perceive as a reality is constructed by individuals. Accordingly, multiple constructions are possible depending on an individual's social context and experience. Wheeldon and Ahlberg(2012) has also posited that the constructivists or interpretive tradition supports the learning processes, which help us to understand how the social world of individuals or a community is constructed. In addition to these views, Cresswell (2012) has also explained that qualitative researchers use terms such as constructivist, interpretivist and so forth, as framework approaches to qualitative inquiry. He went on to give examples of such inquiry, including narrative research, phenomenology, grounded theory, ethnography and case studies.

Behaviourism: Behaviourism, or more specifically the Ellis (1989) model of information-seeking behaviour cited by Case (2012), seems to provide a picture of different behaviours or activities involved in information-seeking. This model which has been applied in different

contexts and has come to be associated with Wilson's (1999) model of information-seeking behaviour as demonstrated here below:

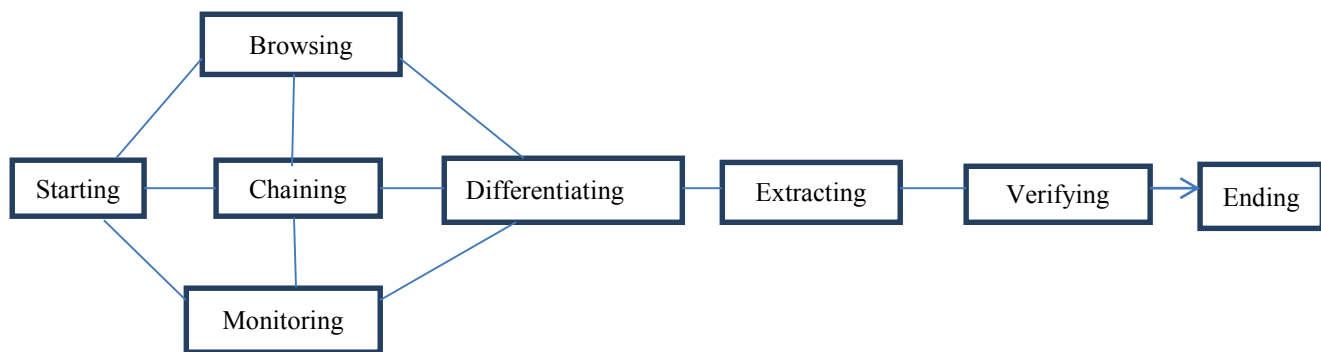


Figure 2.1: Ellis model adapted from Wilson's model of information behaviour
Source: Case (2012:144)

This model proposed a pattern of information-seeking behaviour that started with six types of activities but later on added another two final actions as follows:

- **Starting:** the initial search for information and identifying relevant sources.
- **Chaining:** following chains of citations or other types of connections among materials.
- **Browsing:** semi-directed search in areas of potential interest.
- **Differentiating:** assessing and filtering sources by looking at differences in nature and quality.
- **Monitoring:** maintaining awareness of developments by regular checks.
- **Extracting:** systematic examination of a source to extract material of interest.
- **Verifying:** checking that information is correct (for example data or citations).
- **Ending:** additional (information) seeking at the end of a project (for example) final literature search.

Pragmatism: According to the *Chambers Dictionary* (1993:1343) the definition of pragmatism is: “a concern for the practicable rather than theories and ideals”. Similarly the *Merriam-Webster Online Dictionary* (2015) also defined pragmatism as a reasonable and logical way of doing things or thinking about problems that is based on dealing with specific situations instead of on ideas and theories. In other words, it is a practical approach to dealing with problems and issues in a sensible practical way instead of following set ideas. Moreover, Wheeldon and Ahlberg

(2012) added that pragmatism holds claims about the truth of one view or another although must be connected to practical results of accepting that view.

The pragmatic paradigm is sometimes also called the pluralistic approach. Munyua and Stillwell, (2012) citing Kuhn (1970) points out that there is no single research paradigm that can resolve all research problems. They pointed out that mixing paradigms allows for the collection of data using multiple research methods which is more pragmatic. This view basically means that pragmatism is about what is practical or leans towards ‘what works’. However ,it would appear such a situation was unacceptable and rejected by Green and Caracelli (2003), cited in Munyua and Stillwell (2012), who posited that there is no one best paradigm and dismissed the assumed inadequacy of different paradigms as relics of the past era.

Positivism and postpositivism: Traditionally science has relied on the positivist approach, a view that held that in order to establish the truth about the world, knowledge could be quantified and empirically studied through the scientific method (Wheeldon and Ahlberg, 2012). This view holds that reality is the same for all and that the only research of value focuses on what can be directly observed and measured. In recent years however, these assumptions have been revisited through the emergence and preferred postpositivism as posited by Slife and Williams (1995), cited by Wheeldon and Ahlberg(2012).

Accordingly modern researchers tend to move away from the approach of natural science (Neuman 2011), which looks at scientific knowledge which can be gained independently from the researcher thus embracing the postpositivism approach. According to Fahad (2010), postpositivists emphasize multiplicity and complexity as hallmarks of humanity and their research approaches are interpretive which has led to an emphasis on meaning, experience and knowledge as multiple and rational. This approach is similar to the research that this researcher has embarked upon.

The research looked at the unpredictable, bias and inadequacy of provision of library and information services which distance learners encounter and which this researcher intends to contribute positively to and suggest solutions. According to Mackenzie (2006) citing Gorard

(2004) a combined or mixed method research has been identified as a key element in the improvement of social sciences with research strengthened by the use of a variety of methods. Gorard (2004) further argues that while the mixed approach requires a greater level of skill, it can lead to less waste of potentially useful information. Arguably, it offers researchers an increased ability to make appropriate criticisms of all types of research and more often it has been argued that it has greater impact.

This study therefore adopted the postpositivism paradigm which underpins the mixed methods approach and focuses on pluralistic approaches to derive knowledge about the problem. According to Gorard (2007), mixed or combined methods in research is a key element not only in social science but in education research. One could add LIS as well because mixed method research is not only strengthened but also requires a greater level of skill that can lead to less waste of potentially useful information. The combined methods approach in research adds value and an increased ability to contribute to scholarly criticisms in all types of research and, more often than not as already mentioned, has greater impact. Indeed Mackenzie (2006) has affirmed that while some paradigms may appear to lead a researcher to favour qualitative or quantitative approaches, in effect there is no one paradigm that actually prescribes or prohibits the use of either methodological approach. It therefore follows that in each paradigm used or adopted; both approaches need to be applied if the research is to be effective. Mackenzie's (2006) research journey has been well captured in Figure 2.2 as demonstrated below:

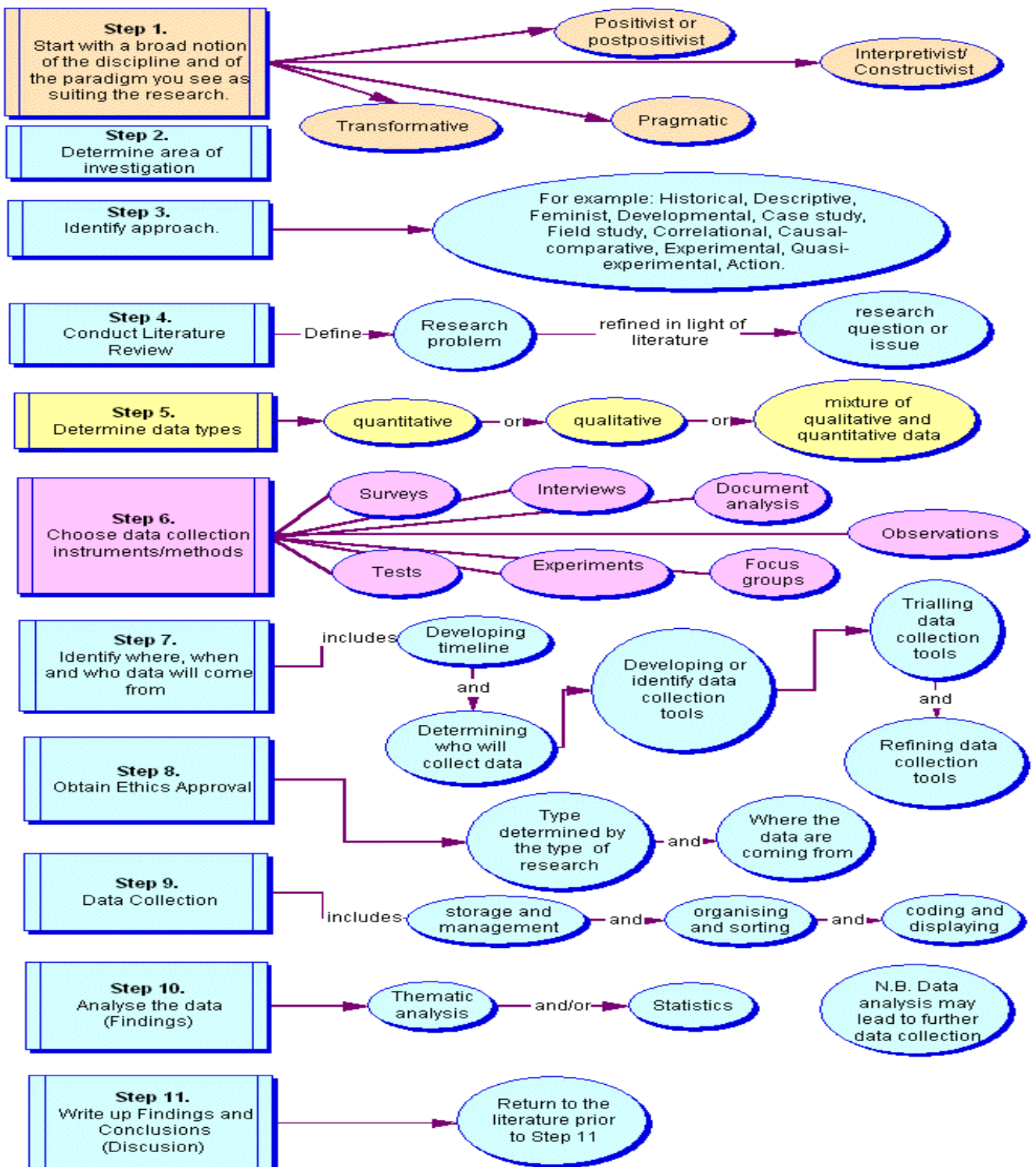


Figure 2.2: The research journey

Source: Mackenzie (2006)

2.3.2 Models

Models are very useful in research because they simplify issues and make people understand what would seem to be a very complex scenario. According to Case (2012), models are said to precede the development of theories. This is often the reason why they are discussed before theories although this is not usually the case. Ideally presented in form of diagrams, models are also seen to be easier to understand than formal theories, especially to those who are new to the topic under investigation or are beginners in research. On the other hand, a theory can explain a group of phenomena, suggest relationships between facts, structure concepts, organize facts into meaningful patterns, and provide logical explanations for facts (Powell, 1992). It can also act as a guide to discovering facts by identifying gaps to be investigated, crucial aspects on which to focus and the major research questions to be answered. In addition theory can be used to identify the most important propositions for not only testing, defining, and limiting the area of research, but also relating the study to other similar studies. Moreover, Connaway and Powell (2010:49), defined theory as a set or sets of variables on the basis of intentions that suggest why events occur in the way that they do; it can also be an orderly explanation for observations that relate to a particular aspect of life.

Modeling is sometimes used simultaneously with simulation. Models can similarly assist in the development of a theory or a paradigm. There is a need therefore to define what a model is and briefly mention its relevance in the study context such as this one which investigates the information needs and information-seeking behaviours of distance learners, and subsequently select the relevant models that will apply for this study.

Connaway and Powell (2010:79) posited that a model is at the heart of the operations research methodology and abstraction. In addition, a model can be defined as an abstraction or a mental framework for analysis or system which involves the use of simplified representations of a real world phenomenon. In other words, models can be used to demonstrate or determine a real system like an interlibrary loan by observing the behaviour of a representative system. Similarly other authoritative studies such as Kebede (2002), have noted that models are constructed to better understand or gain new insight into a phenomenon which they model, and that a model is a

representation of a reality for a given purpose or any set of generalizations and assumptions about the world.

Another researcher, Case (2012), while explaining what a model is, postulated that models focus on more specific problems than theories through illustrating processes which makes it easier to see if the assumption is consistent with what is observed in real life. In other words, a model explains the relationships between concepts to the real world. Models also range from those that are purely pragmatic and descriptive (such as flowchart demonstrating how a document moves through a process) to those that are formal such as statistical analysis and simulations, for example, the use of algorithms in artificial intelligence to model vision. Over the years, various information-seeking models have been developed which vary in their assumptions, scope, structure, purpose and intended use. Nonetheless, the following information-seeking models, (some of which have been developed recently) will be discussed in order to shed some light on the research problem and the models that have been variously developed over the years.

2.4 Models of information seeking behaviour

Over the years many models of information seeking behaviour have been developed and published internationally. More recently, there seems to be a profusion of the models in the LIS field such that it may not be possible to discuss all of them. However, for the purposes of this study, five models by renowned information scientists will be discussed. The discussion will then narrow to those that are pertinent to the study. These include:

2.4.1 The Kuhlthau model of Information Search Process (ISP)

The model of Information Search Process (ISP) by Kuhlthau (1991) is thought to be unanimously applicable to any domain (Case 2012). It is based on theories of learning and describes a series of cognitive and effective stages or behaviours through which people are thought to move as they find and evaluate information. The model is focused on the feelings, thoughts and actions that follow as a person becomes aware of gaps in their knowledge. The model identified seven stages of the information searching processes which areas follow (Kuhlthau 1991):

Initiation - This is the stage when a person becomes aware of the lack of knowledge or understanding to accomplish an assignment and hence the uncertainty and the need for information.

Selection - The second stage, is identification and selection of the area of the topic to be investigated and how to approach it. According to Kuhlthau (1991), at this point, the feeling of uncertainty gives way to a brief sense of optimism about the process and outcome after the selection is done and there is a readiness to begin the search.

Exploration - In this third stage, the information search process becomes difficult to frame and understand hence feelings of confusion and doubt. At this point some information seekers may abandon their searches to expand on their understanding.

Formulation – The fourth stage, according to Kuhlthau (1991), is the turning point of the search process when focus is sharpened and clarity of purpose seems imminent and confidence begins to increase.

Collection - This is the stage when interaction between the user and the systems function well and the users have a clear sense of direction and can specify the need for particular information. At this point the effort is focused on gathering, digesting and recording the most relevant information for the topic.

Presentation - At this stage the search is assumed to be complete in accomplishing the assignment. In other words, one is able to use the retrieved information to answer the initial question. There is usually a sense of relief and satisfaction if the search went well and any further searching at this stage is usually likely to retrieve superfluous or unnecessary information.

Assessment - This final stage has been missed out by several earlier studies, but ideally it is an assessment of what one has accomplished and inevitably this leads to improved self-esteem and awareness. The Kuhlthau (1991) model is based on many years of research, initially with

secondary school students, and has identified uncertainty as a key concept. The model has also emphasized the role that emotions such as frustration or doubt play in motivating a search for information. Although general in its statements, the model has been applied primarily in education.

2.4.2 The Ellis behavioural model of information seeking strategy

The Ellis (1989) model seems to provide details of different behaviours involved in information seeking behaviours. It has been described as a series of paragraphs without a fixed sequence of events but rather the order of actions which might vary and be iterative or repetitive as well. Developed using a grounded theory approach, the model first appeared in a study of social science university students.

This model which has been associated with Wilson's (1999) model has been applied in different contexts. Case (2012) citing various authoritative sources, for example, Meho and Tibbo (2003), used it on social scientists; Thivant (2005) used it to study economists and business analysts; and Bronstein (2007) used it to investigate Jewish scholars. Ellis (1989) in his initial research, included eight research activities which he named and identified as starting, chaining, browsing, differentiating, monitoring, extracting, verifying and ending. Furthermore, Ellis argued that communication with people is a key component in the initial search for information. A point to note is that the Ellis model is based on empirical research and has been tested several times in various studies. A diagram of the Ellis model adapted from Wilson (1999) and details of the eight generic features or research activities is given in Section 2.4.1, Figure 2.1.

2.4.3 The Leckie model of information seeking for professionals

According to Case (2012), one of the early and widely cited models in information-seeking is that of Krikelas (1983) which was seen to emphasize the importance of uncertainty as a motivating factor and projected the potential for an information seeker to source answers from their own memories or from those of nearby people. Krikelas' model contained thirteen components and claimed to be a general one that would apply to 'ordinary life'. The model by Leckie Petigrew and Sylvain (1996) also resembled the Krikelas model in its limitation to a range of people, but it has been preferred in recent studies. This is due to the fact that it is

restricted to professionals (such as doctors, lawyers, and engineers) which is surprising because working class people would be the ideal people for distance learning or lifelong learning; an aspect which was considered in the current study.

The Leckie model features six factors connected by arrows described as flowing from top to bottom, the rational being that although one of the arrows - that of the 'outcomes' - is unidirectional, the characteristics of information needs still influence each other in a mutual fashion. The model projects the links to begin at the top with work roles which in turn influence tasks. Given that the Leckie model is restricted to professionals as already mentioned, it follows that work roles and tasks are thought to be prime factors or motivators for information seeking. While individual demographics such as age, profession, career stage and location are not described in the model itself, they are said to be the variables that shape or influence the information needs. This fits well with the demographics of distance learners. As the emphasis is on working life; beliefs or attitudes are less relevant, thus confirming it was intended to feature in the work-related process.

2.4.4 Wilson's models of information seeking behaviour

Wilson has developed a series of models beginning with the first one in 1981 to the latest one in 1999 (Case, 2012). This evolution may be construed not only to reflect the trend in the practice and theory of information-seeking research but also makes them interesting to analyze and compare. Almost all these models are based on the diagrams of the original model published in 1981. Wilson's (1981) model of information arises as a result of a need recognized by a user who in order to satisfy that need consults formal or informal services which could result in either failure or success to find that information. If the need is not satisfied however, the user may have to repeat the search process (Case, 2012).

This model, according to Wilson, shows that part of the information-seeking behaviour may involve other people through information exchange and that information perceived, as useful; apart from being used by the user, may be passed on to other people for their use as well as being used (or instead of being used by the person himself or herself) (Wilson1999).Almost all Wilson's models are based on the diagram of the first model originally published in 1981 which

identifies 12 components (see Figure 2.3 below) starting with the information user, although Wilson makes it clear that he is interested in much more than use, itself. According to Wilson the user has a need, which may (or may not) stem from his or her level of satisfaction (or dissatisfaction) with previously acquired information. Wilson suggests that the perceived need then leads the user into a cluster of activities, the most straightforward of which is to make direct demands on sources or systems of information. The results of these demands lead either to success (in which the information is used) or to failure, which is presumed a dead end. However information that is not found cannot be used except that which is found as a result to satisfy some goal for the purposive search that initiated it (Mnubi-Mchombu, 2013:25).

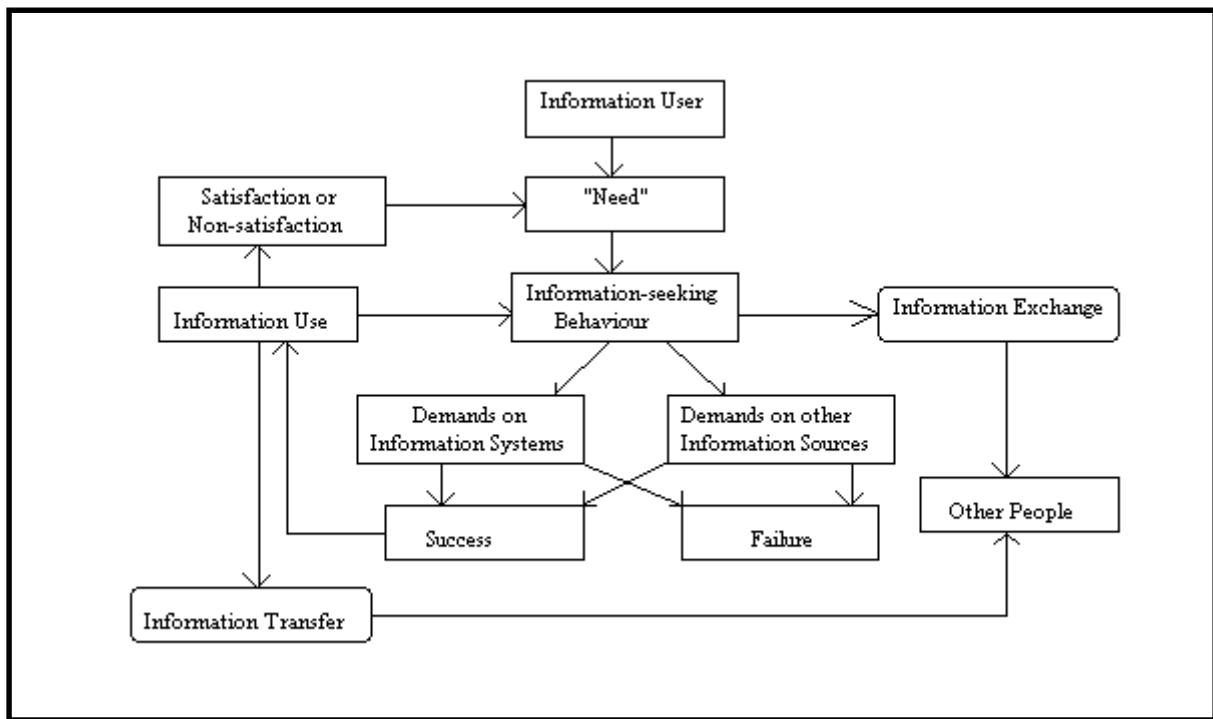


Figure 2.3: Wilson's 1981 model of information-seeking behaviour
Source: Case (2012: 117)

The limitation of this kind of model however, as Wilson (1996) himself acknowledged, is that it does little more than provide a map of the area and draw attention to gaps in research. It does not provide suggestion of causative factors in information behaviours and consequently does not directly suggest hypotheses to be tested. Wilson also observed that the concept of information behaviour was more suitable because it includes other behaviours in addition to the information-seeking behaviour. It has also been observed that the information environment is very dynamic,

is always changing and requires a constant and continuous effort to ensure that the information needs of users are addressed adequately. The other weakness of this model is that it does not offer an escape route to use when the demand upon a system or a service results in failure, unlike the improved Wilson's 1996 model.

Wilson's (1996) model is a major revision of that of 1981 and is based on research from various fields, other than information science. It is based on two main suggestions. The first is that information need is not really a primary need but a need which arises out of other basic needs. The second suggestion is that in an effort to discover some information to satisfy a need, the information seeker is likely to meet with different kinds of barriers.

In drawing upon research from various disciplines such as psychology, Wilson (1996) proposes that the basic needs can be defined as cognitive or affective and the person in context remains the focus of information needs. He notes further that the context of any of those needs may be the person, the role demands of the person's work or life, the environment, technological, economical or political within which work or life takes place. There is a slight change to the earlier framework suggesting that information-seeking behaviour is shown to consist of more types than previously, where the active search was the focus of attention and information processing. The concept is shown to be a necessary part of the information loop if the information needs are to be satisfied. Therefore like the 1981 model, the user remains the focus of the information needs and the barriers are represented by the interacting variables (Wilson, 1999). Elaborating on the intervening variables or barriers, he specified in this model the fact that characteristics of the information source may form a barrier, either to information seeking behaviour or information processing.

Accordingly, Wilson (1996) points out that information-seeking behaviour consists of more types than previously identified, where the active search was the focus of attention. Information processing and use is shown to be a necessary part of the feedback loop if needs are to be satisfied. Other ideas or theories such as coping with stress, and risk reward are also presented to explain why some sources of information are used more than others by a given individual. Other theories also explain why some people may not follow a goal successfully based on their

perception of the social learning and the social theory which forms the concept of self-efficacy. This concept is demonstrated by Wilson’s 1996 model:

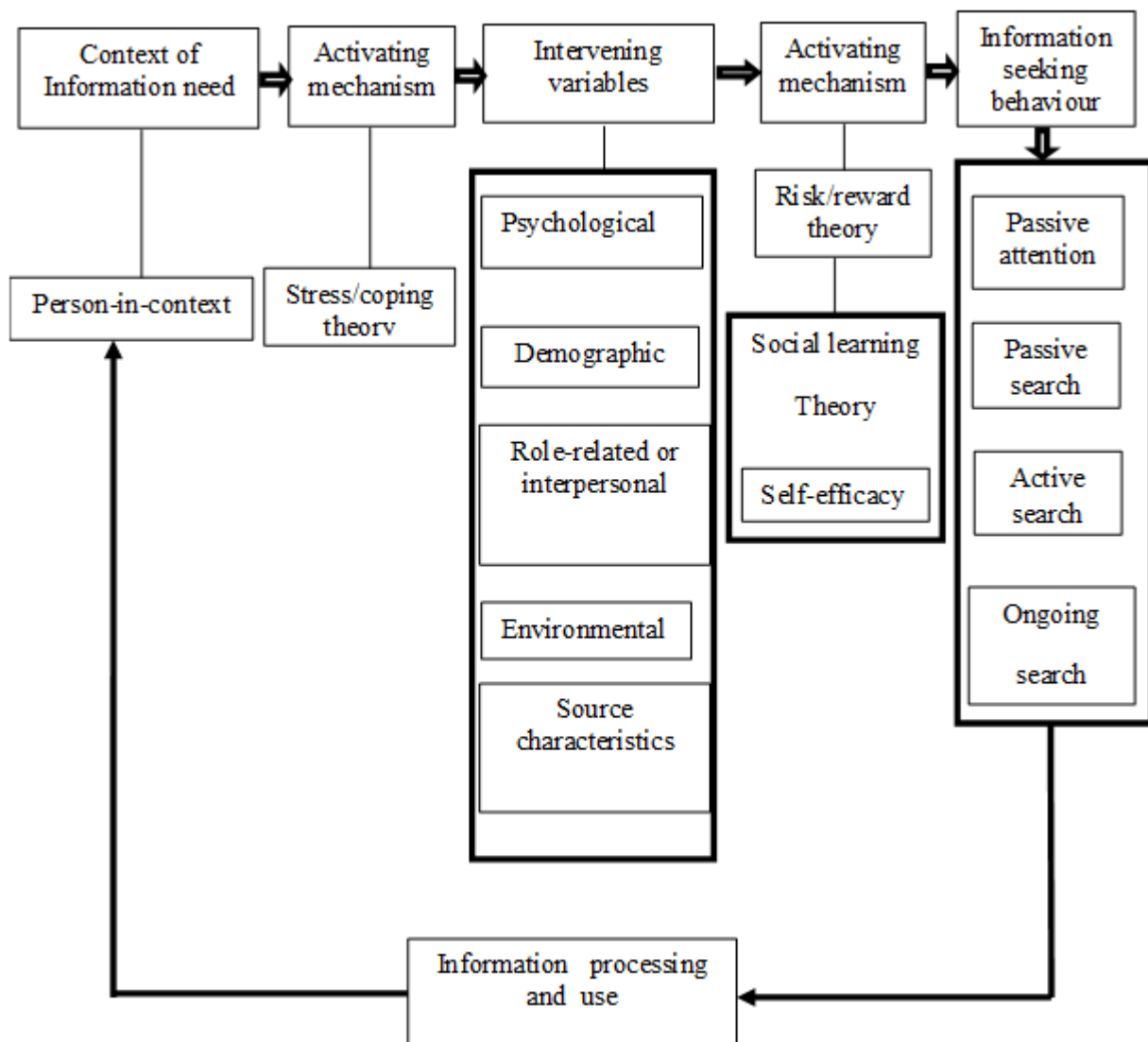


Figure 2.4: Wilson’s 1996 model
Source: Case (2012: 118)

Thus it would seem more prudent to use Wilson’s 1996 model as demonstrated earlier. Given that Wilson’s subsequent models and all other models address similar issues in related ways and are actually complimentary rather than conflicting, this model is adopted for this study together with the Resource-based Learning Model.

Table 2.1: Mapping of Wilson’s model to objectives/research questions

Research question	Wilson’s model variable
What are the information needs of distance learners in Kenya?	Environmental: resources available (characteristics of resources accessibility)
What services are offered by libraries to distance learners?	Environmental and characteristics of resources (physical barriers and time)
Are the services sufficient for the information needs of distance learners?	User context (social networks) user education, environmental (resources available)
What other alternative information resources are available to distance learners?	Demographic (age, education), social roles (parent, manager), environmental and characteristics of sources
What challenges do distance learners face in accessing library services?	Efficacy (social learning theory from psychology, environmental)
What strategies can be used to overcome the Challenges?	Characteristics of resources (availability and access)

2.4.5 The Resource-based Learning Model (RBLM)

It may be prudent to explain some of the current frequently used terms which in recent times apply or are used within the student-centered approach methods of teaching in order to bring into context the resource-based learning approach. This way it can also be demonstrated how the resource-based learning model developed and its applicability to open learning of which distance learning is part of. Such terms include independent learning, student-centered learning and resource-based learning, among others. According to Unwin, Stephen and Bolton (1998), independent learning is also known as learner autonomy learning and emphasizes that independent learning is particularly suitable for postgraduate students where one would normally expect students to engage in literature searches and investigative work mostly on their own. It is also the researcher’s view that such a situation also applies to undergraduates and even in schools for project work although normally the teacher/lecturer is in the background as a facilitator or supervisor.

Recent reforms in education have brought in various buzzwords. These include student centered learning (SCL), and as already mentioned resource-based learning (RBL). According to Arko-Cobbah (2004), SCL is a learning strategy that requires students to work both in groups and individually. It gives students greater autonomy and emphasis on knowledge seeking rather than being passive recipients of knowledge. Citing Gibbs (1992), Arko-Cobbah (2004) elaborates that

SCL gives student's control over the subject matter, learning methods and pace of study. In other words, they are expected to take on a high level of personal responsibility for their learning.

2.4.5.1 Similarity between resource-based learning and student-centred learning

It seems there is a clear link between SCL and RBL. Both these learning systems are based on the principle that students are responsible for identifying and securing information for their needs and challenges and taking decisive measures according to or based on that information. In other words, students are expected to learn from their own use of learning resources either as individuals or in groups. The advantage of RBL as Arko-Cobbah (2004) posited, is that both the teachers and librarians become motivators and facilitators working in partnership with administrators and students to ensure the success of the system. In the same study, Arko-Cobbah (2004) stated that the essential features of RBL are its adaptability to different learning styles and subject areas, acting in its favour especially in promoting student learning autonomy.

According to Noble (1980), resource-based learning could have been used as early as 1976 when students used course workbooks, cassette players, radios, television and other media to find essential information for their course related problems as well as solve their learning challenges. All these activities belonged to RBL systems whether within institutions or from a distance. Noble, (1980) citing Harri-Augstein and Thomas (1991), goes on to explain that during that period it was also known as learning which involved 'transactions with stored knowledge'. Ultimately distance education began to benefit tremendously from RBL (which literally became the saviour of students learning from a distance). These distance learning courses were then variously known as extra mural studies, correspondence courses or external programmes, were already popular and were being used in North Canada, Scotland, United States of America, England and many other countries in the developed world. However, RBL at that time was not as sophisticated as it is now. Therefore early RBL was in place during the pre-digital era which made it cumbersome to implement with merit. With the emerging curriculum reforms in North America, RBL was practiced in Canada in the Manitoba province (MDE, 1994), Saskatchewan and Ontario (Hambleton and Wilkinson (1994). In Scotland, according to the Dundee College Memorandum number 64, 1984 it was implemented by various schools including St James Young High School and St Augustine's High School among others. In England it was used by

the early pace setters of distance learning at the Open University which as its name suggests was open to all types of new education reforms. The London University through their external degree programme also practiced some form of RBL.

Arguably, as with any new changes or reforms, there will always be challenges with RBL. According to Bell (2004); the face-to-face connection or interaction with lecturers is minimal and time for self-paced learning which needed a very high sense of self-discipline became a matter of concern for distance learning practices. Similar and other issues have also been articulated by Arko-Cobbah (2004) including lack of motivation and time for distance learners. Given that they are usually working class people, there is also concern on meeting individual needs and styles for a variety of learners who normally would have different challenges individually with a single RBL package. Costs, lack of person power and support from administration particularly in Africa where libraries and resource centers are usually implemented as an afterthought are also a matter of concern. In addition there were also concerns on guidelines and standards as well which were also lacking.

However, it would seem that there are more benefits for RBL than has previously been realized, the Regina Public Schools in the Saskatchewan province in Canada have demonstrated exactly that. According to the Regina Public Schools and Saskatchewan Learning (2003), RBL promotes or accommodates individual differences in learning styles, abilities, interests, needs and prior knowledge. In other words, students are able to learn at their own pace and resources can be selected to match a student's abilities and needs. Other benefits include inculcating the development of decision-making, problem solving and evaluating skills thus allowing for creativity and originality. Subsequently this impacts on students making them more responsible for their own learning which becomes more meaningful as students are discovering for themselves. This is ideally what distance learners require. It also allows students to become more effective in the use of Information Communication Technology (ICT). Another benefit is that it makes students 'learn how to learn', consequently making them more literate which in turn makes them develop positive attitudes and skills that are useful throughout life (Simba,2014:22).

As a conclusion, and in view of the aforementioned, there is a need to revisit the origins of RBL. As mentioned earlier, RBL is an educational model in which students, teachers and teacher librarians are actively involved in the effective and meaningful use of a wide range of appropriate print, non-print and human resources (Manitoba Department of Education, 1994). This model is a student-centered learning model where students are actively involved, this makes them more accountable on their own. This model has brought in the element of shifting from ‘teacher telling’ to active learning using the resources at hand. The model was developed by the Manitoba province of Canada, among others, to facilitate the implementation of the resource-based learning implicit in the school’s curriculum and as a response to the changing needs of the students.

This is the same situation that applies to distance learners in universities in Kenya. However, the research available does not show that enough has been done or is being done as suggested by Kavulya (2004). Indeed one could easily conclude that there are either no models designed to alleviate the lack of information for distance learners in Kenyan universities or, if they are available, then they are very limited and more effort is required to provide more.

As will be demonstrated in the literature review, distance learners have unique information needs which currently are not being fulfilled in the Kenyan context. This is due to the fact that distance learners have little or no access to libraries and information services as opposed to on-campus or full-time students. Therefore if adopted, this model would go a long way in fulfilling some or most of their information needs. A diagram of the model is offered below to demonstrate the relevance of the model to the study.



Figure 2.5: The resource-based learning model

Source: MDE (1994:10)

Postgraduate students in distance learning programmes generally study in isolation, and as individuals have unique information needs. However having gone through the library systems over the years; they have already acquired some experience which they can explore in their use of learning resources. This is one reason why they were selected for this study. The RBLM has a variety of interventions and approaches to resources and access to support distance learners varied needs. Due to its requirement for abilities in awareness of independent specialized knowledge and independent learning skills, the model empowers distance learners to inquire, discover and construct meaning and cuts across all subjects in all areas. This fits very well with the unique and varied needs of distance learners who far removed from universities and study in isolation and at their own pace. They need current awareness and updates of both print and non-print materials and also input from human interaction, which (in this case would be subject librarians or distance learning librarians) where possible. This approach will most likely equip them with skills for more effective use of the resources available. With the advent of ICT which

plays a critical role in the delivery of distance learning, libraries and information services; access and use of the learning resources will not only be more satisfying but also enjoyable thus motivating more interest. This is how the RBLM functions. It therefore fits very well with the situation that applies to distance learners who have had some exposure to library systems but are currently studying in isolation.

2.5 Summary of the chapter

This chapter presented the conceptual framework that guided the study. The postpositivism paradigm, which favours the mixed study approach, was also discussed. Various models on the information needs, information-seeking behaviour and independent learning were presented. Mackenzie, (2012) has argued that recent researchers have become more complex with their research methods with mixed-methods being more acceptable, common and more preferred by first time researchers and early career researchers rather than looking at research as only either quantitative or qualitative. The study therefore adapted the postpositivism approach due to its accommodation and suitability in the mixed method research approach. Wilson's 1996 model of information-seeking behaviour guided the study due to the information needs and information seeking behaviour of distance learners. The RBL model which underscores the individual learning approach of distance learners also underpinned the research process of the study. This is because distance learners usually study independently but also rely primarily on resources available. This makes the availability and accessibility of these resources crucial for their success. In the next chapter, the literature review will be presented.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

This chapter provides an overview of some of the studies undertaken on the role of academic libraries in supporting distance education globally, in the developing world as well as in Kenya. The literature includes both published and unpublished theoretical and empirical studies (Joyner, William and Glatthorn, 2013:142). These studies included reports, dissertations, thesis, books and journal articles, both in print and electronic format. The reviewed literature includes an overview of higher and distance education, its benefits, challenges and support from university management. The sources are organized in such a way as to cover the international perspective as well as Africa, and Kenya in particular which is the focus of the study. In addition, the literature review is also organized so-as-to explore the research problem and research questions such as the information needs and information-seeking behaviours of distance learners; current trends; available services; barriers and hindrances; available support and emerging issues in order to demonstrate the knowledge-base of the research problem (Joyner, William and Glatthorn, 2013). The literature review also covers the development of academic libraries, and how these can better support distance learning as well as their standards and guidelines.

3.2 The purpose of a literature review

A literature review is significant and is invaluable for carrying out research. It is a critical discussion of all significant available and relevant literature that contributes to the understanding of a subject or study. According to Fink (2009:3); a research literature review is a systematic, explicit, and reproductive method of identifying, evaluating and synthesizing the existing body of completed and recorded work produced by researchers, scholars and practitioners. In a recent study by Simba (2014:54), it was stated that a literature review expands the researchers' understanding and knowledge of the topic under investigation and also gives a researcher an overview on what has been researched previously on the topic. This helps the researcher not only to place the study in its proper context but also reveals the key issues and gaps arising from the literature. Hutchinson (2010:26) has posited that a research project should unfold step-by-step and hence explain what the study is about to the reader clearly and confidently. A well-grounded

research literature review will most likely do that. In other words, the purpose of a literature review should not simply be to review literature. It should go beyond a simple articulation of what previous researchers have done and found and should be able to offer significant arguments that needs to inform readers of the latest and new developments of the topic, through an updated account of the relevant studies that make up a particular topic's body of literature. The review also should establish the researchers' credibility in terms of adding or producing a new body of knowledge and models where possible. This is essential in demonstrating that the researcher is keeping abreast of their field and is aware of and conversant with academic discourse and debate within their research area.

It is also important that the literature review can make a case for the researchers' own agenda. In other words, it needs to set the current study within the past research, identify gaps, showing the significance and justifying the methodological approaches. On the other hand review should not only be accepted for the type of study being conducted but also highlight the limitations in the past studies thus uncovering the unjustified assumptions. Such a review should also provide an enhanced background to the study and expound the basic characters and true nature which in this case is distance education, information needs and information seeking behaviour for distance learners, as theorized by other researchers in the field in order to establish how they relate or deviate from the current study.

In view of this, it can therefore, be concluded that the literature review simply guides the researcher on the thinking that will inform exactly what the researcher is investigating. However, as mentioned earlier and confirmed by O'Leary (2010:81), the purpose of the literature review is really not simply to review literature. While a literature review attempts to answer the research questions, it should also inform readers of any new developments in the field, establish researcher credibility in the production of new knowledge, and argue the need for and relevance of the study. In other words, a literature review needs to set the current study within the context of the past research and to identify the gaps that show the appropriateness, justification and significance of not only the study but also the methodology, the limitations and the assumptions that underpin the study.

3.3 Overview of higher and distance education

The *Concise Dictionary of Education* (1982:107) defines Higher Education (HE) as education beyond secondary school that is viewed as intellectually more rigorous and sophisticated than that of the secondary level and that leads to academic degrees or is on a comparable intellectual level. A more general dictionary, The *South African Concise Oxford Dictionary* (2002:545) defines higher education as education at universities or similar educational establishments especially to degree level. These definitions remain true today. Over the years, it has been assumed that in order to get better jobs and hence improve on their social and economic status, people should acquire higher education. Due to a rising demand and quest for university degrees and the inability of universities to absorb all those who qualify for university admission, distance education, is playing a central role as an alternative for those who qualify for university education but who for some reason or another do not get admission to universities through the normal admission procedures. Hence the explosion of distance learning programmes in institutions of higher education. In some cases this has led to what has been dubbed as ‘academic capitalism’ which simply means partnerships with for profit organizations to increase revenue, and in the process, the commercialization of higher education (Berg, 2005:654).

A study by Jowkar (2009) described distance education as the formalized learning received while the student is expected to have minimum contact and is on location outside the university campus. Both the teacher or lecturer and the student are expected or have minimum physical contact although there is much reliance on e-communication given the availability of an efficient ICT infrastructure in place. Distance education is often described as learning from or at a distance. However it has been generally accepted as the suitable term to bring together both the teaching and learning elements of this field of education. Distance education has also been touted as the term for the future, although it started with many generics such as correspondence courses, home study, external studies and independent study, among others. Perhaps the main problem with the term is that it tends to mask the fact that many students in distance learning are metropolitan residents, and that it is the distance between the teaching and learning activities that are crucial, not the magnitude of the geographical separation of learner and lecturer.

There has been a meteoric rise in the need for education globally because of the belief that the more one is educated, the better the chances of securing a decent job and by extension better life, social and economic empowerment. Higher education in particular has witnessed global changes in many ways which have seen a phenomenal growth in the global arena. This has in turn led to not only the transformation of the way in which higher education has hitherto been delivered, but also a beginning of a variety of several kinds of higher education settings. In the process, some countries including Kenya have diverted from the traditional and conventional universities to what has now become a very popular phenomenon otherwise known as open and distance learning (ODL) centres in higher education. According to Beldarrain (2009:140), distance education (DE) emerged as a response to the need to provide education access to those who would otherwise not be able to participate in face-to-face courses on-campus.

3.3.1 Evolution of higher education and distance education

Higher education globally has witnessed changes in many ways. This has brought into play a variety of different types of methods of delivery. This has at times called into question not only the quality of education being delivered, but also the mushrooming of many types of institutions of higher learning. Inevitably this has brought in a mix of names for a variety of programmes and universities contrary to what has been known as the traditional university. According to Fahad (2010:35) citing Obanya *et al.*(2002), there are basically three types of universities, namely, the conventional university, open and distance learning universities, and dual mode universities:

- **Conventional university:** This is the traditional university which delivers full-time education based on-campus using face-to-face delivery methods. This is the kind of education that is mostly available all over the world to a student population with ages ranging between 16 to 26 years who are usually not in any type of employment. These students usually would have access to any university facilities at any time of the day (24:7).
- **Open and distance learning universities:** This system provides education at a distance. It is estimated that 10% of the universities in the world are in this category. Students in these types of universities are often adults aged about 30 years and above and are usually employed and hence unable to undertake full-time study. These types of students (the main subject of this study) are usually separated from their lecturers by distance and work, and more often than not

study at their own space and time. These students either have very limited access or no access at all to library services.

- **Dual-mode universities:** These kinds of universities combine and often offer both an on-campus (face-to-face) type of education under the same management, as well as part-time or remote students. However, some of the students in these types of universities do not have the same privileges as those of their main (on) campus colleagues. Some universities also refer to them as distance learners. These students, together with their distance learner colleagues, have been of concern to various experts leading to them being labeled by this researcher as ‘academically segregated’. This study is mainly concerned with this type of university in Kenya and those students who do not have the same privileges as those of their colleagues on main campuses. In his study Fahad (2010) explained the various types of universities practicing globally. They include the conventional universities, Distance and Open Learning Universities and the Dual mode universities. The following diagram demonstrates these types of universities worldwide:

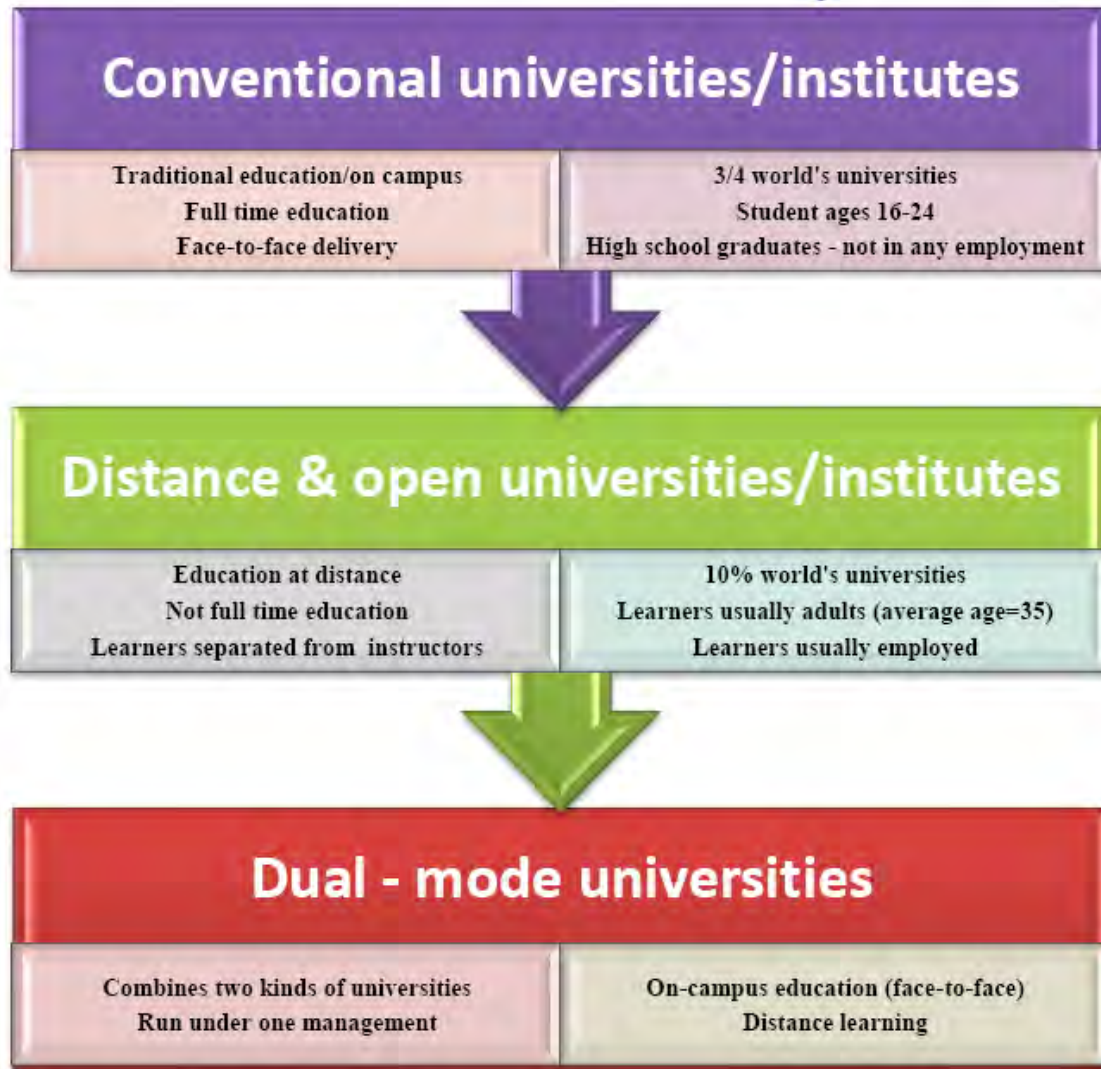


Figure 3.1: Types of universities

Source: Fahad (2010: 37)

Other developments in higher education concern the fundamental rights of all people to have access to education for their social and economic development. These fundamental rights have been recognized by various international organizations. The main international organization which supports these new developments and initiatives is the United Nations Educational, Scientific and Cultural Organization (UNESCO) through its Division of Higher Education and Education for All (EFA) goals adopted at the World Education Forum in Dakar, Senegal in April 2000 (UNESCO, 2002).

In terms of support (especially for distance education) UNESCO recognized the formidable challenges which require radical changes in higher education. This support is necessary especially because distance learning provides opportunities for higher learning and for living throughout life giving learners options of flexibility of entry and exit points within the system (UNESCO, 1998). In other words, there should be no constraints or barriers to higher education and people should be accorded the opportunity and support for individual and social development to educate themselves at anytime, anywhere. Another researcher in distance learning education, Agalo (2008:3) posited that higher education requires diversification in terms of models, recruitment methods and criteria to meet the rising demands for higher education.

Other international organizations which recognized and supported the right to higher education for all include the Working Group on Higher Education (WGHE) of the World Bank (WB), which works closely with the Association of the Development of Education in Africa (ADEA) which deals mainly with issues of Tertiary Education in Sub-Saharan Africa (Saint, 1999). Apart from UNESCO and the World Bank there are also other notable interregional and regional international organizations such as the Organization for Economic Co-operation and Development (OECD), the Commission for European Union (EU), the International Council of Open and Distance Education (ICDE), the Commonwealth of Learning (COL); and in Africa, the African Council for Distance Education (ACDE) which according to UNESCO are competent to act in this field (UNESCO, 2002).

COL in particular prides itself on its focus on education including higher education. As an intergovernmental organization (it operates in 54 member states with particular emphasis on 47 developing countries) it therefore has a wider impact in its initiatives. In one of its latest publications, COL in the Commonwealth, 2009-2012 Country Reports (COL, 2013), it has meticulously elaborated on its mandate of ensuring its country action plans and activities relating to the international development priorities of some of the developed countries such as the United Kingdom (UK), Canada and Australia among others. These priorities and initiatives involve Open Schooling, Teacher Education, Virtual University for Small States of the Commonwealth (VUSSC) and Higher Education, among others.

With regard to Higher Education in particular, COL provides leadership in quality especially on Open and Distance Learning (ODL) (which is the main concern of this study) through its micro website (www.col.org/qualityMS). This is a useful and convenient online access point to quality assurance resources in ODL and is really a positive development given the apathy with which some ODL providers approach ODL implementation. As well as these, there are also other freely available toolkits for open schools, higher education, teacher education and non-formal education (COL, 2013).

The other useful initiatives include the Commonwealth of Learning Review and Improvement Model (COLRIM) which provides higher education institutions with a ‘do it yourself’ approach to institutional internal quality audits. COL developed COLRIM as a cost effective approach that focused on self-assessment and it helps institutions to improve and add value on internal quality assurance, planning and systematic improvement. The package which consists of a conceptual framework, a handbook and is freely available from COL, is an excellent opportunity for ODL providers to improve on their standards and/or provision of library services to distance learners. In principle, there should not therefore be an ODL provider who would have any reason to give substandard services to distance learners because they can borrow these ODL management practices from the international arena.

Similarly, the ICDE has provided several initiatives towards higher education and in particular open and distance learning. Founded in 1938 with its Secretariat in Oslo, Norway, ICDE has been and continues to be a global force, not only in lifelong, open and flexible learning but also in education generally. As a global organization and in order to meet new global challenges presented by new knowledge-based economies and societies due to emerging ICTs, ICDE has had to re-think and restructure its strategies. Building on the success and achievements of the ICDE Strategic Plan of 2009-2012, ICDE followed up with another recent ICDE Strategic Plan of 2013-2016. In developing this strategy, ICDE has drawn on an analysis of current and key trends and has further been informed by consultations with other members and key stakeholders (ICDE, 2012).

As a non-government organization (NGO), ICDE works very closely with UNESCO and shares its values and key objective which is the attainment of quality education for all as stipulated in UNESCO's Declaration of Learner's Rights and Responsibilities in Article 26 of the Universal Human Rights Declaration passed on 10th December 1948 by UNESCO (1948) in Paris. Among the key values which guide the ICDE is its belief that education is a universal right which should be available to all and that the needs of the learner should be central (ICDE, 2012). The Resource-based Model used for this study has called this approach the student-centered philosophy or approach currently in use in most learning institutions implementing best management practices. In other words, the student remains or should be the focus of any teaching or learning. The model has brought in the element of shifting from 'teacher telling' to active learning, using the resources that are at hand (MDE, 1994:11) which brings about independent learning.

However, while these learner's rights must be respected and indeed implemented, academic institutions must not at any time exclude the other rights of a learner, that is the right to access to information and by extension the provision of library services to support this learning. The right to information is also guaranteed in Article 19 of the Universal Human Rights Declaration as far back as 1948 (UNESCO, 1948:12). Most Governments have had to upgrade their constitutions to include their citizens' rights of access to information and/or the right to know. In Kenya for instance the new constitution enacted on 27 August 2010 provides the right of access to information to every citizen (Republic of Kenya 2010:27). It is also worth noting that while most of these organizations have encouraged and actually support the rights of education for all, ICDE has recognized the worldwide growth and increased demand for higher education. In this context, it has called for restrictions especially on open learning to ensure that national standards are followed and that there is controlled growth. The ICDE strategic objective 1 has encouraged the promotion and importance of open, distance, flexible and online education including e-learning and educational policies but at the same time stressed the observation of standards for their success (ICDE, 2012:5).

In doing this, the ICDE has called on its key partners and stakeholders to facilitate policy discussions among a selection of representatives from governments, universities, private and

public sectors, on the current and future developments of open, distance, flexible and online education (including e-learning) by the end of 2015. At the same time, it has called on major ranking agencies to begin to focus on non-residential education (sometimes also referred to as distance education) before the end of 2015. This particular point on ranking needs immediate support if not implementation, especially given that ranking or lack of it in distance learning programmes in developing countries could possibly contribute to the continuous poor global rankings of universities in these countries.

According to this researcher, one of the key areas that need immediate attention is the issue of regular checks on the implementation of standards and policies if available. Most universities in the developing world are accredited and recognized by their governments through various bodies such as commissions or councils for higher/university education. However, a quick literature search did not yield much on any standards or policies that specifically deal with the information needs of distance learners or off-campus students. However all is not in vain as there appears to be a modicum of policies, standards and guidelines from CUE. It would appear however, that there are no proper mechanisms on checks and the regular enforcement of any standards regularly by CUE. The word regularly is stressed because even when officials from the CUE visit these institutions, experience shows that more often than not they are always concerned with the traditional (on-campus) or full-time students' information needs and library services. In some of the presentations that have been done by these officials while inspecting library services, experience shows that no questions are ever raised or asked about any plans or arrangements in place for the provision of library and information services for remote or distance learners even though it has been demonstrated that distance learning programmes are expanding in almost all universities in Kenya.

Some studies done by other experts in Africa, and also in Kenya, have confirmed that distance learning programmes are implemented haphazardly or are not given the attention that they deserve in terms of access to library and information services. Msuya and Maro (2002) for instance investigated the provision of library and information services to distance learners at The Open University of Tanzania (OUT). The study presented a long list of challenges, including stock that is acquired mostly through donations, gifts and grants from international organizations

which could be irrelevant to the user's studies or curriculum. The study also found that there are acute staff shortages no user orientation education or skills in the retrieving of information. The study concluded that the information provision infrastructure to support independent learning at the university was still underdeveloped to support independent learning and that the library system is not well stocked and therefore could not comfortably support distance learning students who live in non-learning environments. This has in fact contributed to some of these students not being able to complete the courses registered for in time (Msuya and Maro, 2002:189).

Other notable studies included Kavulya (2004) in Kenya, Oladukun (2009) in Botswana, Wawire and Omboi (2010) in Kenya, Okello-Obura (2010) in Uganda, Gudo, Olel and Oanda (2011) in Kenya, Muyinda (2012) in Uganda and Nwezeh (2010) in Nigeria among others. Nearly all of these studies concluded that while universities were rushing ostensibly to provide opportunities to qualified people who cannot secure places in universities and apparently providing alternative and innovative learning methods, this positive development was facing a plethora of other impediments. Key among these impediments is the issue of provision of library and information services which has not been addressed adequately although there is recognition that it is critical for the success of the distance learning programmes. This prompted one of the researchers namely, Nwezeh (2010) to observe that a student could actually graduate without having ever used the library.

While most universities are aware of this inadequacy, it is worrying that they are moving ahead with the implementation of open and distance courses. These courses are often ostensibly called the "cash cow" apparently due to the money readily available from such programmes, seemingly with little input in terms of resources from universities. Recognizing their rights to access to information and library services, some students in off-shore campuses have often resorted to extreme actions including demonstrations to demand for these rights. However despite these drawbacks, there seems to have been some remarkable recent developments. As has already been mentioned, there are some organizations and associations such as the ACRL (2008) among others that are available to ensure that some standards are observed, especially in the developed world. They meet regularly not only to chart the agenda and the way forward, but also to

strategize and ensure standards and guidelines are regularly updated and followed regarding distance education. Some of them also offer financial support where available, with regard to higher education programmes and also as has been recognized lately, support the explosion of distance education and distance learning programmes. These recent developments will have an impact not only on higher education but will also streamline the implementation of ODL and avoid the haphazard approach currently prevailing in the implementation of these programmes by some institutions.

3.3.2 Studies done on distance education in Kenya and recent developments

This section will discuss in summary distance education in Kenya and then introduce the provision of library services in academic libraries in Kenya in order to give a knowledge base for understanding this research journey since both are central factors in the study. In addition, it will also briefly offer the profiles of the Technical University of Mombasa as well as the University of Nairobi which have been selected for the collection of the data for the study.

The evolution and history of distance education is a long one. According to the Holy Bible, it can be traced back as early as the first century AD when St Paul used his letters or epistles to the young churches around the Mediterranean. This can be defined as a form of distance learning due to the growth of the early Christian church. These early letters which continue to be read to date can be seen as some successful form of distance learning. Later on with the age of printing and posting, in the 1840s, an Englishman by the name of Isaac Pitman began teaching shorthand by correspondence in Bath, England (Anyona, 2009:18).

There has been a series of reports written by prominent domestic as well as international scholars. Technically, the first government policy paper to address what was then known as Distance Higher Education (DHE) was in 1966 (Anyona, 2009). This was followed by a series of commissions and reports such as the Ominde Education Commission which recommended the establishment of an advisory committee on ODL in 1976. This was followed-up by subsequent reports such as the MacKay Report 1981, Kamunge Report 1988 and Koech Report 1999 (Muricho 2013).

Up to this point, there was no national policy available to guide the implementation or delivery of ODL in Kenya. The situation was that each institution started and implemented their own programmes as they saw the need to address such education needs. The Kamunge Report of 1988 seemingly was satisfied and supported the external degree programmes which are offered by the University of Nairobi as an example of a successful and optional distance learning programme that could be available to distance learners throughout the country. It also recommended that facilities for printing and recording of educational materials of the college of Adult and Distance Education to be updated and expanded to meet the growing demand of distance teaching (Anyona, 2009).

Several years and several studies later, authorities are now seemingly concerned with the proliferation of ODL programmes and lack of standards and guidelines. One of the latest efforts is through the Government of Kenya sessional paper number 1 of 2005 which recommended the establishment of an Open University and use of ODL in human resources development at all levels (Anyona, 2009). Hitherto, the practice of ODL was provided by various institutions through their own internal institutional policies. Some of the main institutions which provided this type of education included the University of Nairobi, Kenyatta University, Kenya Institute of Special Education (KISE) and the African Medical Research Foundation (AMREF), among others. However, without any official authority or body to enforce or oversee and regulate these programmes there was a very strong, likelihood that they lacked consistency and merit. This is confirmed by Anyona (2009) who observed that while distance learning holds promise; a number of obstacles have to be addressed before it can be implemented in Africa seemingly to improve on consistency and merit. The challenges include technological constraints, telephone and communication infrastructures, especially away from major towns and urban centres. Although some of these challenges are being addressed through various policy documents and these have yet to be implemented (Anyona, 2009) and the situation prevailing in Kenya is no exception.

Another recent study observed that the social demands in Kenya have increased the need for higher education, which have intensified presumably as a result of the need to boost the social status of individuals (Wachira 2012:2). At the same time, the Government of Kenya is making every effort to make education (including higher education) accessible and affordable to as many

of its citizens as possible. It is doing this by encouraging institutions of higher education to admit students who have minimum qualifications and can afford to pay. Inevitably this has led to a rise in the number of both public and private universities, other accredited institutions and the establishment of a number of self-sponsorship students. By extension, there has been a sharp rise in students enrolling in distance education, who are part-time and self-supporting students and do not reside on-campus. This means that services and facilities are stretched to the limit.

Arguably all these are very positive and well intentioned developments, however, they have also created many types of demands upon the institutions, and a paradigm shift especially in terms of support and information service delivery. This led Wachira (2012) to conclude that the introduction of these flexible learning models in the universities in Kenya was impacting negatively on library services in ways that call for the re-designing of policies and services processes, among other recommendations.

Gudo, Olel and Oanda (2011) investigated on university expansion in Kenya focusing on issues of quality education, challenges and opportunities. The study looked at the significant increase of the demand for university education, especially what is popularly known as the double intake by the university fraternity in Kenya, and its impact on the quality of service delivery in public and private universities. In this study, it was observed that with the increasing numbers of students seeking places in public universities, the question of quality is critical and requires urgent attention. The study noted that most public universities in fact did not have the physical facilities to effectively offer such services to its current student body.

Recent developments in Kenya include free education in both primary and secondary schools. This also means that the demand for university education has outpaced supply. The appetite for university education is also encouraged by the belief that university education will guarantee a secure, rewarding, lifelong and successful career. The working classes also wish to achieve better qualifications. This has resulted in an explosion of weekend; evening and part-time students which has in turn stretched university resources to a maximum. Due to the fact that the government insisted on double intakes; this generated a threat amongst some lecturers in

universities to strike if the decision was not reversed (Musembi, 2011 cited by Gudo, Olel and Oanda 2011:205).

The study by Gudo, Olel and Oanda (2011) which involved both librarians and lecturers revealed interesting results. The study found that the existing facilities were characterized by serious congestion (with some students being forced to sit outside and listen to their lectures through the windows) and that there were no adequate internet facilities, among other shortcomings. Therefore, despite the pressure by the government to admit more students (double intake) and the hunger for university education to improve or change jobs; this tendency had impacted negatively on quality and standards. One of the glaring inadequacies was that the shortage of physical facilities, print journals and internet facilities in university libraries negatively affected the quality of teaching and learning in the universities. Citing Eshiwani (2009), the study by Gudo, Olel and Oanda (2011) observed that universities were forced to work under adverse conditions, poor salaries, and lack of resources for non-academic expenditure such as text books, journals, teaching and research equipment, as well as the maintenance of such expenditure.

The study also found a glaring problem in terms of the ratio of lecturers to students. According to the CHE (2010) as cited by Gudo, Olel and Oanda (2011), the recommended ratio of lecturers/students associated with quality teaching and learning in various disciplines is recommended as follows:

Table 3.1: Recommended lecturer and student ratio by CHE

Programme	Lecturer/Student Ratio
Applied Sciences	1:10
Arts and Humanities	1:15
Medical and Allied Sciences	1:7
Pure and Natural Sciences	1:10
Social Science	1:18

Source: Gudo, Olel and Oanda (2011: 207)

A mix of four universities (both public and private) were analyzed in terms of lecturer/student ratios. All of them were found to have a shortage of teaching staff. The University of Nairobi (the oldest in Kenya, which ideally should be setting the standards) was found to have a shortage in all the departments as the table below demonstrates:

Table 3.2: Ratio per department of lecturing staff to students at University of Nairobi

Name of College	Lecturers	Students	Ratio(Existing)	No of lecturers expected	Short fall of lecturers
Agriculture and Veterinary Science	157	1,683	10.72	168	11
Architecture and Engineering	146	3,796	26.00	380	244
Biological and Physical Sciences	153	2,972	19.425	297	144
Education and External Studies	78	7,203	92.346	400	322
Health Sciences	285	2,919	10.242	417	132
Humanities and Social Sciences	368	18,059	49.074	1003	635
Total	1,187	36,632	30.861	2665	1478

Source: Gudo, Olel and Oanda (2011: 208)

As a conclusion, it was found that this demand for university education exceeds the capacity of public universities to accommodate all qualified candidates. As a result, the quality of education is negatively affected, more so in public universities due to the larger number admitted against limited available resources than in private universities. Shortages of physical facilities for teaching and learning; unsatisfactory student welfare services, shortage of lecturers; inefficient management of universities' examinations and inadequate funding for research are some of the

problems affecting both private and public universities. The study further concluded that the demand for increased admission without expanding the universities' resource base is a precursor to a significant further decline in quality of and standards for university education in Kenya. While increased admission is noble and achievable, it requires re-thinking in terms of financial investment and modern ICT infrastructure to enhance teaching and good collaboration between government and the private sector, including private universities as equal partners not only in higher education in Kenya but also in distance education.

A recent study done by Otike (2013) looked at the legal implication of providing information services in support of distance learning institutions of higher learning in Kenya. The study examined the legal challenges of librarians in Kenya and their experience when providing information services in support of distance learning. While this study dwelt with the legal or copyright aspects of the reproduction of materials for distance learners, a main portion of the study also examined what Otike called the phenomenal growth of higher education in Kenya and distance learning in particular.

In this study, it was noted that at independence in 1963, Kenya had one constituent college of the University of East Africa (now the University of Nairobi) with a student population of less than 1,000. By March 2013, the number of universities in Kenya had increased to over 55 universities, of which 22 of these are public universities (Otike, 2013:2). The total number of students has also increased substantially from a mere 1,000 to over 200,000 and is still growing. Most of these students are located in public universities, with Kenyatta University leading with 61,928 students. This huge number of university enrolments has made the cost of funding university education unbearable for the government. This in turn has forced public universities to look for funding elsewhere in order to supplement the paltry funding from government. The obvious choice for this extra supplement for most universities as mentioned earlier, has been the introduction of distance learning, evening, weekend and part-time programmes which in turn brought in a large number of students all needing equal services all-round. This development has in turn also affected the libraries which in any case are always in a perpetual financial crunch. Despite the fact that they are supposed to be provided with at least 10% of the total institutional operational budget annually for acquisition of library and information resources as per the

standard LIBR/STD/09 CUE (2014), the practice is that it hardly happens. Consequently libraries especially in government funded universities have been seriously underfunded to the extent that it is rare to access or find any new title or issue of a journal in the library.

This scarcity is also made worse by the growing number of library staff who have also attempted to improve their own education for potential promotion. This scenario has also brought about ethical issue and conflict of interest for some senior staff in certain of these libraries who take advantage of their positions to hoard scarce and popular materials. In an impromptu exercise carried out in one of the public universities, a senior member of staff was found with 150 titles in his office both processed and unprocessed (Otike, 2013). This demonstrates in some way how the information practitioners themselves are in dire need of information and can even compromise their own codes of conduct in order to hoard resources. This is despite the fact that it is unethical especially because the librarians are the custodians of these scarce and vital resources themselves. This is also an infringement of the basic philosophy and constitutional right of access to information as enshrined in the Constitution of Kenya.

As in many other similar studies, this study also observed how a number of public universities embraced the option of distance learning as the most effective way of meeting increased demand for university education. At the same time, these public universities argued that in order to succeed, they require a number of things. High on the list is qualified and motivated staff, well stocked and staffed libraries, excellent ICT infrastructure, and current subscribed digital and online information resources. The study concluded that with the perpetual need for ever scarce funding, this could be an elusive ideal in terms of successful information services which are crucial not only for distance learning programmes but also for communication or learning between lecturers and students (Otike, 2013). This is all the more reason why academic libraries need to provide an exemplary service to their users. However, the current situation in the following two academic libraries for instance seems far from satisfactory.

3.3.3 Library services at the Technical University of Mombasa (TUM) and University of Nairobi (UoN)

At the time of undertaking this study, the researcher briefly examined the situation in terms of service delivery at two libraries in both the Mombasa Technical University in Mombasa County and at the University of Nairobi Kikuyu Campus to gauge their current status as a background to the study.

3.3.3.1 Technical University of Mombasa (TUM)

Mombasa Technical University is a relatively new university. It was upgraded to a fully-fledged university in February 2013 having gone through various phases from a Technical Training Institute, a National (Mombasa) Polytechnic in 1972 and Mombasa Polytechnic University College in 2007 (Republic of Kenya, 2007a) to its current status. However, it has been implementing both distance, part-time and evening programmes for a long time before that. It has a total population of approximately 10,000 students (including both full-time and part-time). These students on the main campus are served by approximately 30 members of library staff. When the researcher interviewed the librarians, it was found that there are no specific members of staff (librarians) dedicated to distance learners. TUM also has what is referred to as satellite campuses in both Ukunda and Mabokoni in Kwale, (about) a 100 kilometers from the main campus, which is situated in Tudor, Mombasa and also another campus in Lamu which is an island about 500 kilometers from its main campus situated in Mombasa where the main University Library is located. It is assumed that part-time, evening students and students from these satellite campuses are served by the main campus, University Library based in Tudor, Mombasa. There are a few resources set up in Kwale which is sometimes referred to as a Resource Center, after the students had gone on strike demanding these services (Kavuri, 2013).

The library currently holds about 35,000 titles of books in various disciplines, including business studies, engineering and health sciences among others and selected daily newspapers, journals and newsletters. The library also subscribes to various databases for e-books, e-journals (Kilemba, 2011b). This seemingly also services the needs of distance learners. However a check to test the remote accessibility of these resources by this researcher found that it was not possible to access these resources on three consecutively days (15, 16 and 17 April, 2014). The feedback

message reviewed was network error and no route to host. It was not possible therefore to access both the University website and the library as well. This could mean that the ICT infrastructure is not efficient or was down on those particular days for some reason or another. The bottom line however, is that the much touted e-resources were not or are not accessible by remote users and so therefore do not benefit either part-time or distance learners. One can imagine the frustration that remote users face in trying to access and satisfy their information needs. This confirms the notion that ideally most or all library services are not designed with distance users in mind. A close check on all policy papers available, including the charters, do not indicate what services are offered to distance learners, neither are there provisions, and responsibilities or commitments available for distance learners.

3.3.3.2 The University of Nairobi (UoN)

The University of Nairobi is sometimes referred to as the mother of all universities in Kenya, the reason being it is the oldest. According to Kavulya (2004), it was initially known as the Royal Technical College of East Africa, but in 1961 was transformed into the University College of East Africa and renamed Royal College Nairobi. In 1963, this Royal College became the University College of Nairobi following the establishment of the University of East Africa, with Makerere and Dar-es-Salaam as the other constituency colleges. In 1970, the University of East Africa was dissolved with each of the East African countries establishing their own national universities. The University College Nairobi was then renamed University of Nairobi.

Over the years, it has developed into a huge entity and is the largest in Kenya. According to the fact file on its website (UoN, 2015) the University of Nairobi has 35 faculties offering over 584 programmes to a total number of 79,000 students. These are served by 2,052 academic staff including 154 Professors and 253 Associate Professors as well as 5,525 administrative and technical staff. It is assumed that these include librarians as well and that the total number of students includes distance, part-time and evening students as this is not indicated on the fact file. There is also an additional figure of 148,824 alumni which under normal circumstances may or may not be part of their library users. With other stakeholders, this could stretch their resources even further.

While most of the University of Nairobi resources are housed on the main campus at the Jomo Kenyatta Memorial Library, there are also a cluster of five College libraries namely the College of Human and Social Sciences Library, the Biological and Physical Sciences Library, the Agriculture and Veterinary Science Library, the Health Sciences Library and the Architecture and Engineering Library. Given that the University of Nairobi was the first to be established, it also follows that it was the first to establish what was then called correspondence or extra mural studies. According to Kavulya (2004:115), distance education in Kenya started with the admission of 594 students to the University of Nairobi in 1986. It is interesting to note that in the same study conducted in 2004 it was stated that this programme “continues to be based on a correspondence system and a few contact hours when lecturers make visits to the regional centers” (Kavulya (2004:116). In the same study, it was reiterated that to date this method is still used by a number of other universities in Kenya such as Kenyatta University (KU) and Strathmore University (SU) among others. This is still the method of delivery in distance programmes in some of the Kenyan Universities, despite the advent of new technology.

The University of Nairobi later on established a College of Education and External Studies and specifically the Centre for Open and Distance Learning (CODL) at Kikuyu Campus, which is 27 kilometers away from Nairobi City and the main campus. The purpose of the centre which is an initiative of the University of Nairobi to diversify the delivery mode and increase access to quality university education to Kenyans and beyond using ODL modes. The mission is to provide and maintain equitable opportunity for accessing quality university education through use of multimedia, consultancy and research in open and distance learning (UoN, 2014). In tandem with this initiative is the establishment of libraries in all the centers proving open and distance learning, including Kikuyu Campus Library and branch libraries in Mombasa, Kisumu (two libraries) and Kenya Science. These libraries are equipped with modest resources (both print and e-resources) which apparently can be accessed remotely by all. According to their website these services include lending of resources and also, interlibrary loans, assisted electronic literature searches, online searches and e-mail services, (library help/ask a librarian), photocopying and printing, training on e-resources, library pocket guides, library orientation and user education. Other services include the use of Facebook, Twitter, Google⁺ and Yahoo.

These are very good plans and the University of Nairobi libraries appear to have put in place some elements of service delivery to their remote users. In terms of ICT infrastructure for service delivery to distance learners, it would appear a lot of effort has been put into service delivery including a service charter (UoN, 2014) dedicated to distance learners. However, this service charter does not include the expectations and rights of distance learners in terms of delivery of library and information services to satisfy their needs. A great effort has however gone into the ICT infrastructure including an e-Learning Centre and access to library resources from remote locations. However, as has been the case with most strategic plans and delivery of services in the developing world, its efficiency and consistency may be questionable. This can be attributed to a number of reasons including the available ICT infrastructure, power outages and load shedding in the country, poor or substandard equipment and lack of consistent maintenance of the equipment.

3.3.4 Higher and distance education

Higher education in Kenya, as with most countries begins after high school. In Kenya for some time now there has been what is called the 8-4-4 system of education. This system of education was implemented as a result of a report by Mackay known as “The Mackay Report” in the Ministry of Education (Muricho, 2013) and it involves eight years of primary education (after nursery or kindergarten), four years of secondary or high school, and four years of university education (although some courses such as medicine and engineering usually take more than four years to complete). This system of education in the East African academic landscape has brought other challenges as well in that students cannot be admitted in a neighbouring country’s universities unless they go through what is popularly called foundation courses. A similar situation exists for those who wish to proceed to overseas universities, especially the UK and the USA, which is the most preferred destination for most Kenyans for their higher education.

There are various stakeholders who have vested interest in how higher education in Kenya is implemented and regulated. The main body charged with this responsibility is the Commission of University Education (CUE), formerly known as the Commission for Higher Education (CHE). This is conducted through the universities standards and guidelines (CHE, 2012) which has a standard on open and distance learning and library services though seemingly lacking an

enforceable mechanism hence not mandatory. However the revised version of the same CUE (2014) standards have more elaborate standards and guidelines for open distance and e-learning such as ODEL/STD/07; ODEL/STD/08; ODEL/STD/11 and ODEL/STD/12 which deals with information and library access, e-learning and the adequacy and appropriateness of the ICT infrastructure. There is also more emphasis and coverage of standards and guidelines for university libraries covered by LIBR/STD/01 to LIBR/STD/12 which give clear guidelines on university libraries. However, while these standards and guidelines and indeed all the others look perfect on paper, they do not offer any solution to the consequences of what would happen if they were not implemented. Most of them are therefore routinely ignored. This prompted the Education Cabinet Secretary, Jacob Kaimenyi, to motivate CUE to act in order to ensure that there was quality as demanded by professional bodies, further that those bodies should be consulted and involved while developing related programmes (Wanzala 2015). While the Cabinet Secretary was not specifically targeting distance learning programmes, it is evident that some university programmes have been suspended in any case which puts the university regulator in the limelight (Wanzala 2015). Other notable players in higher education include the Ministry of Education, the National Commission for Science, Technology and Innovation (NACOSTI) which funds research, and the Higher Education Loans Board (HELB) which funds higher education through loans to students, among others. There are also various policy papers, statutes and sessional papers that give direction to all university programmes.

While it is gratifying to have these standards and guidelines for university education which is a great step forward in streamlining university education, they were revised in 2012 and 2014. It could therefore be concluded that most universities have not yet implemented these or if they have, then it would only be haphazardly given the recent expansion of universities in Kenya and the speed of growth of distance learning programmes and satellite universities have been growing. The other important document is the Ministry of Education (Higher Education Science and Technology) sessional paper number 12 (Republic of Kenya, 2014). This sessional paper, a policy framework for education and training for reforming education and training in Kenya has presented details on higher education and also on ODLs. The focus of the sessional paper has been on expanding access, equity, improving quality and relevance in tandem with the government's flagship document; Kenya Vision 2030.

Kenya Vision 2030 is a summary of Kenya's official long term national planning strategy. This publication states in detail the main goals of the Government of Kenya in terms of economic, social and political development. To achieve these goals, the government developed what has popularly been called the three pillars' that underpin Vision 2030 and the major projects to be undertaken initially between 2008 and 2012. These pillars are anchored on microeconomic stability; continuity of governance reforms; enhanced equity and wealth creation opportunities for the poor; energy, science, technology and innovation; land reforms; human resources development; security as well as public reforms (Republic of Kenya, 2007b:3).

As the country plans to transform itself to a middle income status nation through these development plans, it was also expected to meet its Millennium Development Goals (MDGs) as agreed internationally. The pillar that has opened many opportunities and changed the academic landscape is the social pillar. Through various sessional papers and statutes among other publications, the social pillar which is premised on is investing in the people of Kenya has Education and Training (ET) as its main sector, with others including Health, Environment, Water and Sanitation. In order to achieve its national obligations in line with the new constitution, the National Government of Kenya has placed great emphasis on education and training, which is currently anchored in the Bill of Rights contained in the New Constitution. This resonates well with most of the international organizations such as the UN and the World Bank in Education for All (EFA). As already mentioned, this is what has made distance education one of the most popular and preferred means of acquiring higher education for those not able to obtain it through the normal channels. Accordingly and with this new approach, higher education ceased to be a preserve of a privileged few as more individuals can access it through distance education. When discussing 'distance education' it is usually assumed that students are the main focus of the discussions. However in reality, distance education has two inter-related elements which are distance teaching and distance learning. In this type of education, each element can be considered as half of the process of distance education. A simple diagram by Keegan (1996) cited by Fahad (2010:38) has captured these elements:



Figure 3.2: Keegan's distance education elements

Source: Fahad (2010: 39)

According to Keegan (1996) the first element of distance teaching is the process of developing course materials for the distance learners by the teachers or the institution involved in this mode of education. The second element, distance learning, is the process seen from the student's perspective and how the student will achieve the goals and outcomes of the course or module and outcomes and successfully complete the programme.

Admittedly over time, distance education and its meaning or ideal definition has been the subject of much debate. It seems difficult for any single definition to be accepted by all. Various scholars and theorists have identified or offered many definitions. It seems however that most of these definitions have been affected by the nature of this kind of education and the technology available at the time when the definitions were written, given that technology is very dynamic. In general, most definitions tend to describe distance education as a similar education system with the same goals although some literature may concentrate on one aspect of distance education more than the other. It seems also that, there are some polarities, between a variety of terms such as 'part-time', 'weekend', 'school-based', and 'evening parallel', among others. However, some definitions have focused on key aspects like separation in space and time while others such as Fahad (2010) looked at other elements such as support technologies and administration. The majority however tend to concentrate on the main feature of distance education, where the keyword is distance.

According to some scholars including Holmberg (1998); Keegan (1996); Robinson and Bowden (2002), the key feature of the term distance (which according to these scholars means separation in time or space for both learners and instructors) has tended to focus their attention initially to define distance education based on the theory of distance (Fahad, 2010:40). However, all or most of these studies concluded that distance education is key to the provision of education opportunities to many people in many places. With this in mind, it can easily be deduced that the key aspect of distance learning is the extension of education to students in other locations at anytime, anywhere, contrary to the traditional (face-to-face) type of education. In other words, it can be described as formalized learning received with minimum contacts from any location but ideally away from campus but with minimal physical contacts, during weekends, evenings or through e-communication (Jowkar, 2009).

Undoubtedly as new technologies and new media of communication emerge, there will be even more definitions. As these advances and developments come into play, they will enhance not only distance education but the traditional system as well in terms of methods of delivery and teaching. A clear picture of distance learning, its evolution and history has been captured very well through what has been termed as the family tree of distance learning as outlined by Flores (2006) citing a presentation by Holden (2006), as Figure 3.3 demonstrates:

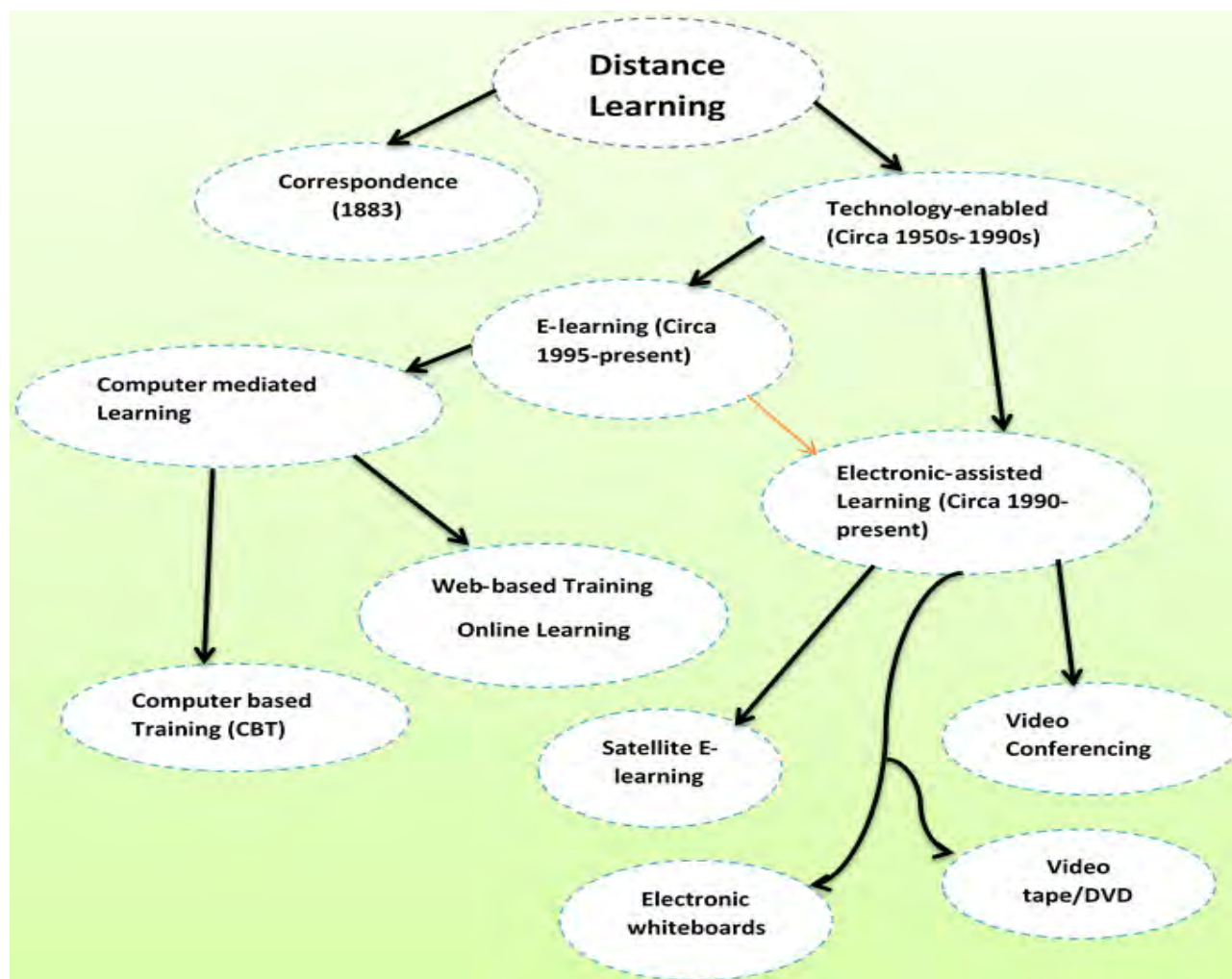


Figure 3.3: The family tree of distance learning
Source: Fahad (2010:44)

In the USA, the first university to start distance learning was Pennsylvania State University in 1886. The first USA Open University was New York's Empire State College which began to operate in 1971, (Anyona, 2009). In the UK, the British Open University (BOU) now simply known as the Open University also started to operate in January 1971 although plans for its establishment had been in place since 1969. In view of this, it can be concluded that distance learning began many years ago and while in the beginning the modes of delivery were very cumbersome, it has evolved and has been improving over the years to what it is now-using modern technology very well organized according to mandatory policies, standards and guidelines.

According to Anyona, (2009), the British Open University (the most innovative university in the world) has played a major role in the development of much of the important research in distance learning. It has also been observed that China is the current world leader in open and distance learning due to the volume of its activity and also by its diversity with over two million students at the Open University of China alone. It can therefore be concluded that the British Open University was the major reason for the development of open universities in other countries such as the USA, Japan, India, China and Turkey among others. This concept has since spread to other parts of the world such as India at Indira Gandhi National Open University (IGNOU) and the Open University of Tanzania, among others. In Kenya there have been discussions since 2005 regarding the Open University (Anyona 2009) but to date nothing concrete is in place as yet.

In the recent past, there has been a phenomenal growth of distance education in the global arena. This growth has called for innovative ways, not only modes of delivery, but also on policies and strategies in order to cope with the revolution caused by ICT and the high demand for higher education. In the developed world, this has been the trend for many years now. According to Fahad (2010), higher education and distance education developed mostly in the 21st century. However while this is a positive development, this researcher is of the view that there has not been proper planning for this distance education explosion as much as there has been in the developed world, especially in most countries in Africa as confirmed by Kavulya (2004), Wawire and Omboi (2010) and Wasike and Munene (2012) among others.

With the advent of new technologies, pedagogical and delivery methods globally have improved tremendously. According to Fahad (2010), distance education developed widely during the 20th century, especially in pedagogical quality and with the advent of new communication technologies. Citing Ben-Jacob (2000), Fahad (2010:36) suggested that “distance learning would become a commonplace phenomenon and would allow vast numbers of learners to further their education”. However Bower (2001) stressed the importance of distance learning by saying:

“Who could doubt that distance learning in the multiple form it takes today is the hottest, sexiest and most controversial issue in American higher education (HE). Hardly any issue or newsletter is published that doesn’t contain at least one article on the topic of distance learning or education technology”.

However, while these new developments have encouraged some countries especially in the developed world to put into place measures which have resulted in various working papers, policies and standards for quality assurance, Africa has been slow to take the initiative. Recent studies have shown how some countries have handled this proliferation of distance learning programmes but Kenya has however been slow in the innovation, transformation and tapping into this very lucrative element of the education sector.

3.3.4.1 The Kenyan perspective

It is important to give an overview of the recent developments in Higher Education in Kenya including any new policies and the changes in regard to the oversight of HE from the Commission for Higher Education to the current Commission for University Education. Kenya, the Republic of Kenya (RoK), is a country situated on the East Coast of Africa astride the equator. It is bordered by Somalia in the North East, Ethiopia and Sudan to the North, Uganda in the West and Tanzania to the South. It extends approximately four degrees on each side of the equator, stretches between longitude 34° East and 42° East, and covers an area of 224,960 square miles or 586,646 square kilometers (UN, 2011) as illustrated in Figure 3.4. It was a British Colony until 1963 when it became an independent country. Nairobi is the capital city of Kenya and is also the seat of the Government of Kenya (GoK). It is the largest economy in East Africa as well as the hub of commerce, travel and finance in the East African Region (Central Intelligence Agency, 2014).

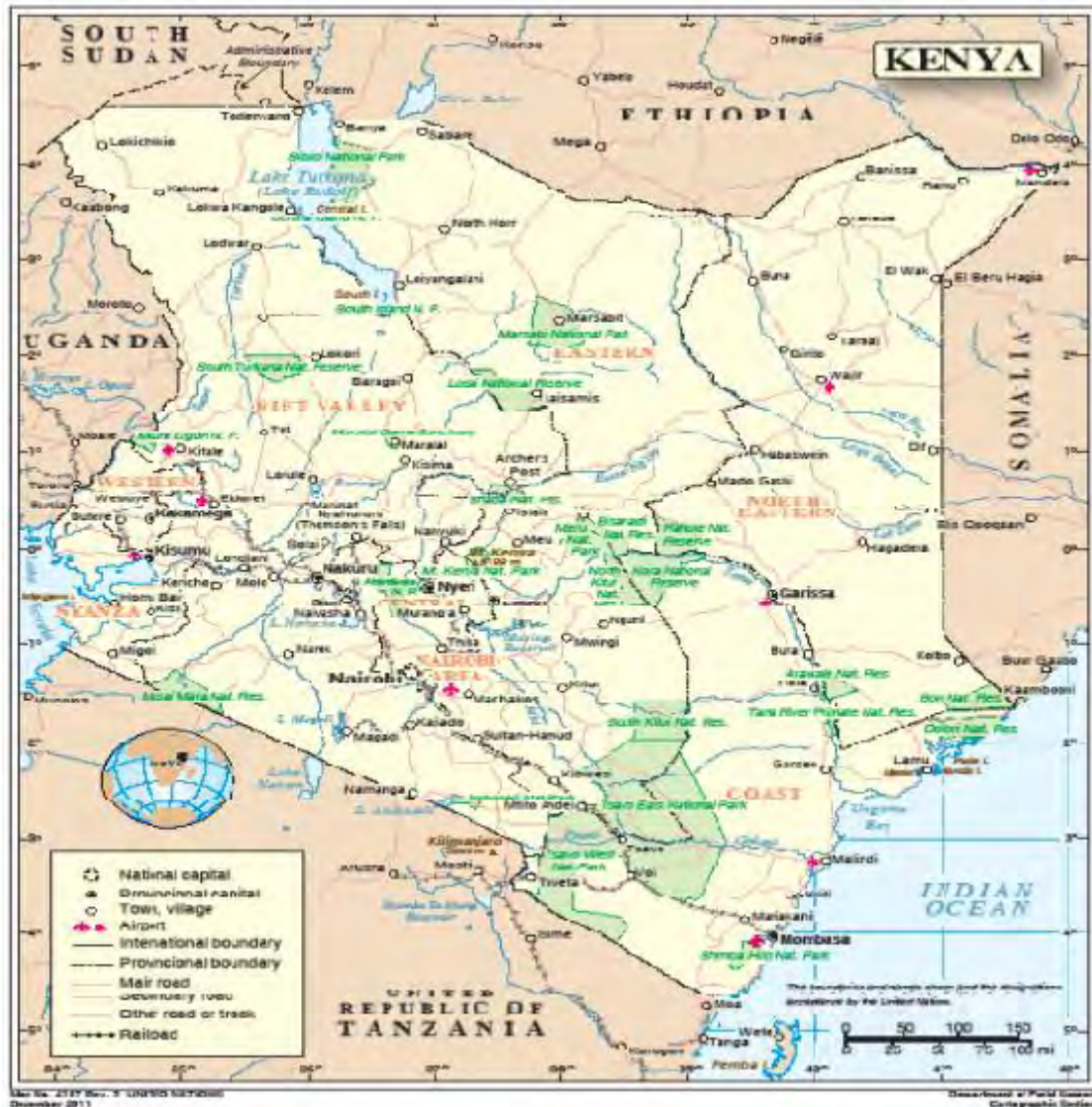


Figure 3.4: Map of Kenya
Source: United Nations (2011:1)

In the new constitution promulgated on 27 August 2010 (Standard media, 2011) and subsequent elections of 2012 the newly elected government of President Uhuru Kenyatta CHE opted to reduce the size of ministries (now officially known as cabinet secretaries) to eighteen in line with the new constitution from the then forty, which was what the NARC (National Rainbow Coalition) government under president Mwai Kibaki comprised of. Among these new ministries is the Ministry of Higher Education Science and Technology, which is and has always been a major department of all governments since the colonial era. It is important to mention that all governments since independence starting with that of President Jomo Kenyatta have always

placed particular emphasis on the Ministry of Education although occasionally under different names. The reason for this is because this ministry has always been in charge of higher education. This includes, by extension the management of higher (education including all universities and any other institutions offering higher education in Kenya) through the then (Commission for Higher Education) CHE which is now known as the Commission for University Education (CUE). The Ministry is also responsible for standards and guidelines, innovation, research, science and technology, among other initiatives. Distance education which is delivered through universities and other institutions in Kenya, is required to follow certain guidelines and standards as laid down by the Ministry of Higher Education Science and Technology through their watchdog, the CUE, but these specific guidelines and standards, came into being only recently (2012). Due to their unenforceable nature, the guidelines are not easy to implement, and are hence routinely ignored by some universities.

3.3.5 Challenges and barriers to services and support for distance learners

As mentioned earlier, a library can be described as the nerve centre of a university or higher learning institution. It can therefore be safely stated that without the library there is not much that can happen in the learning and teaching activities of a university and all other related academic matters. This is because the existence of institutions of higher education and especially the university is dependable to a larger extent on a well-organized effective and efficient university library. This is because libraries support the learning, teaching and research of their parent organization which is the university. The importance of a library in any university cannot be overemphasized and the management of a university which does not recognize this simple, fact undermines the role of the library. It is not enough to call libraries support services given the key role which they play. They should be placed squarely in the academic hierarchy which is where they belong given that they must satisfy the learning, teaching and research needs of the whole university population. This is exactly the role of academic libraries in Kenya, which is or should be the same as in other parts of the world. However, as in any other service delivery departments, there are challenges in terms of the kind of services and support that they offer to their clients.

Despite the many statutes, policies and other documents to enforce standards now seemingly in place to cater for the library and in a small measure for distance learners, the type of services

which academic libraries offer in some of the universities in Kenya remains below par and several studies have painted a very desolate picture of this dilemma. This bleak picture is supported by Kavulya (2004) in his study which stated that library services in Kenyan public universities were characterized by extremely inadequate resources in terms of funding, information materials, equipment and staffing. Ideally the library is seen as an instrument of teaching complimenting lecturers' efforts and students' presentations. Indeed the librarian can be viewed as a teacher as well assisting and guiding the student through methods of investigation and research. Accordingly, this is achieved through the acquisition of information materials not only to support the teaching and learning processes, but especially to satisfy needs of all members of the university community including distance learners. However, the emerging concern is the type or kind of services that distance learners receive from academic libraries.

As with most university libraries, the most important aspects of any library are basically the access to the facilities and skills with which readers can use to benefit from its resources. Thereafter all other services are more or less similar as in any other academic library, but these rest on two key elements among others as follows:

(i) Access: The library should be easily accessible to all its users not only to the building but as and when users need to access resources and at their own convenience time. Most important however is access to satisfy their information needs. All materials should be easily accessible; whether electronic or hard copies and should be organized in such a way that all systems are user friendly with simple instructions on their use or operation(s).

(ii) User education and information literacy: All readers and users should be able to obtain and evaluate information in line with their information needs. It is therefore very important for libraries to organize regular guidance on orientation, user education and information literacy skills. These skills should be able to equip them with the ability to locate, evaluate, manage and use a wide range of sources for problem-solving, decision making and research. This will in turn empower users to be self-sufficiency in accessing and exploiting both print and electronic resources in the libraries.

Kavulya (2004) in his study stressed this point when he emphasized that the case for information literacy programmes is even stronger for undergraduates who enter universities with limited experience and information skills. It is equally important for postgraduates, for the advancement and development of their learning and research. University libraries in Kenya should also place emphasis on and offer these skills not only to all students but also consider the distance learners as part of these efforts so that they can have equal skills and by extension equal benefits from the library as their on-campus or full-time colleagues. Having acquired, processed and stocked the library, other services ideally include the following although this is not an exhaustive list:

Kilemba (2011a) the then acting Librarian at the Mombasa Polytechnic University College (MPUC) Library stated the following services were offered at the MPUC library:

- a) Circulation: Borrowing and returning, long and short loans, reference services, interlibrary loans and any other general enquires.
- b) E-services: Online Public Access Catalogue (OPAC) training, e-books, e-journals and all other databases, institutional repository for past examination papers, and all other e-resources.
- c) Photocopying and binding services: This service is available to all readers at a cost.
- d) Archives: Non-current records including past printed examination papers, past daily papers, journals and other documents intended for preservation are maintained here for reference purposes.
- e) Special Collections: Documents of a special category such as maps, government policies and other related papers, legal documents audiovisual materials and any other related documents are housed and loaned from here.
- f) Special needs: These services are offered to any special users and the physically challenged.
- g) Reference services: For reference services, special reference user needs including current awareness and selected dissemination of information.
- h) User Education: Orientation usually done at the beginning of the semester and ongoing user education and any other training services are also offered.

At that time, MPUC was not a fully-fledged university and it may be possible that the list or type of services offered currently may have changed. This list is not therefore exhaustive by any means but these types of services are typically what is offered in most Kenyan universities and

indeed in most developing countries, although they might vary slightly from one university to another. At a glance however, it is easy to notice that there is no mention or focus of services for distance learners or part-time students nor is there any mention of them. As mentioned earlier even with these very modest services the distance learner has not been receiving the same services as their full-time counterparts. This is proven by various studies (including in Sub-Saharan Africa) by Msuya and Maro (2002); Oladukun and Aina (2009); Nwezeh (2010); and Chikonzo and Aina (2012); Wawire and Omboi (2010); Wasike and Munene (2012); Wachira and Onyancha (2012) and Wachira (2013). In their studies almost all of them concluded that distance learners were not adequately catered for in terms of ideal services for distance learners. Most universities never really had any specific mention of a service dedicated to distance learners, and neither were there any policy papers and or standards for libraries on issues to do with distance learners. It was and still is assumed that the university library services which have been put in place are suitable for all library users, and “all” includes the category of distance learners. This is contrary to the developed world where the distance learner is specifically looked after in terms of their information needs for studies as demonstrated by guidelines and standards of the ACRL (2008).

In the developed world, the librarian is involved in planning of all programmes and/or course development discussions right from the beginning and is therefore involved in the pre-planning of distance learning programmes or any other programmes that the university may be planning. The librarian is therefore able to plan for the reading materials in preparation, not as an afterthought as is the current practice in some of the institutions in the developing world. Although it can be argued that librarians are part of various committees, the reality on the ground is different. Due to the fact that most librarians have not acquired doctoral qualifications they are more often a passive entity especially in senior university committee meetings, often because their position(s) are looked down upon by other academics seemingly because most of them do not have the same academic qualifications. They are usually not at the rank of professors and most are without doctorates. This is all the more reason why the recent CUE (2014) standards for university libraries pushed for deputy university librarians to have a minimum of a doctorate and to have published several articles and papers in peer reviewed journals. Some universities (such as the University of Nairobi) are also changing the job title from deputy university librarian to

Library Directors to remove the stigma or inferiority complex, often associated with the profession.

In terms of involving librarians or in the pre-planning of programmes and course development, this point was stressed by Jenkins (1996:41) who stated that to provide a good service to the distance learner, the librarian and the course development team should work together. The Commonwealth of Learning (2013) has also pointed out that librarians should have lists of materials required in advance to ensure the books are on the shelves and this should happen before any programme takes place or before the implementation of any course. This approach helps the librarian initiate the procurement processes which are very slow in the Kenyan context. All too often, the librarian in some universities is brought on board after all the decisions have been made and/or when problems occur due to lack of teaching and learning materials. That is when a quick memo from the management advises the department to liaise with procurement officers to have a certain number of books in place within a certain period of time. The fact that the librarian should actually be selecting the books jointly with faculty is often ignored and it is not unusual that proposals from the library are routinely ignored.

It has already been mentioned that distance learners are catered for very well in the developing world in terms of their challenges and barriers to information needs. In Australia for instance, the University of Central Queensland embarked on a study which experimented with using electronic means to deliver library and information services as well as to determine the information needs of remote postgraduate distance education students to ascertain how these needs could be satisfied (Appleton 1997). The study revealed that the majority of students were not aware of library services and resources available to them, neither were they aware of how to use the library effectively, among other shortcomings. The conclusions from this survey resulted in recommendations and implementation of several activities which were as follows:

- Developing user-friendly library interfaces;
- That librarians and information technology specialists need to work together to help students and respond to their problems;
- That online library user tutorials are needed to assist students;

- That a help-line dedicated to distance learners was needed not only to connect students to the facilities and services but also provide an opportunity to talk to a student through a problem in real time;
- Offer CAL (Current Awareness Library) programmes; and
- Access to electronic databases through the library network to enable remote access.

Other notable authors who have interrogated library services for distance learners in the Commonwealth and have contributed immensely especially in the Commonwealth of Learning include Wilson (1978) who is regarded as the guru on information needs and information seeking behaviour for distance learners, Sheppard (1983), Perraton (1987) and Watson (1996) among others. There is therefore rich sources of information from some of these pioneers, unlike in the developing world (including Kenya) where there seems to be very little research and hence a dearth of literature on the topic (Kavulya 2004). In Africa, most countries do not pay enough attention to distance learners' information needs and do not treat them with the seriousness that they deserve, hence the scarcity of studies on the subject. Researchers conducted on this issue include Badu (1991), in Ghana, Thwala (1996) in Swaziland and Behrens and Grobeler (1996) from South Africa and Mudongo and Mnjama in Botswana. South Africa is regarded as the giant of distance education through their University of South Africa (UNISA). These among others can be regarded as some of the earliest scholars to have shown concern for the information needs of distance learners on the continent.

In East Africa, some of the earliest scholars and experts to draw attention and concern to the information needs of distance learners included Kamau (1996) at the University of Nairobi. Kamau wrote on the kind of support that Bachelor of Education student required for what were then called external distance learning. In Tanzania, Mmari (1996) also wrote on library services experiences of first year students at the Open University of Tanzania. However, as has been confirmed by recent studies, Wachira (2013) for example, there is a lack of recent literature, studies or any meaningful developments on the topic. This study will therefore attempt to fill this knowledge gap. The lack of research can be attributed to various factors including lack of support from parent organizations, reluctance to enforce standards and apathy by overseers (enforcement agencies) for non-implementation since the standards seemingly are not

mandatory. Indeed in the early days, the overseeing of university education was left to the central government which brought political interference as opposed to the current position of professional overseers of university education in Kenya such as the CUE.

The developed world has continued to innovate and engage with new ideas and implementation for equal support and services to distance learners. Official and professional boards, organizations and associations continue to oversee and ensure that standards and strategies are in place even before distance learning programmes are implemented and that are followed accordingly. There is through such respected associations as the ACRL in the USA, which has the mandate to oversee and ensure that standards for distance learning as approved by their Board in 2008 are followed (ALA, 2014). COL (2013) an international organization which functions as a technical professional agency for fostering and supporting distance education; and the authoritative International Council for Distance Education (ICDE) are among some of these organizations. Some of the activities of these agencies and their positive impact and input on distance learning has greatly impacted on terms of setting the agenda for ease of access to library and information resources for distance learners. The ICDE in particular has a major impact on distance learning as it strives to put in place measures to ensure equal access to information for distance learners. Issues regarding distance learning barriers and hindrances and access to information are discussed, planned for and updated regularly. To demonstrate the seriousness with which they consider and deal with these issues, the ICDE already has policies and strategic plans in place up to 2016, namely the ICDE Strategic Plan, 2013-2016 (ICDE 2012). There are many other organizations in addition to these; however the bottom line is that their mandate is to ensure distance learners are not marginalized in terms of access to their information needs. Institutions supplying distance education must adhere to the guidelines and standards developed for this purpose.

The issue of lack of attention for distance learners information needs in the developing countries was mentioned by Oladukun (2002a: 293) in which it was stated that “except for a handful of University libraries, library support services to distance learners is almost non existing”. Two years later, Kavulya (2004:24) writing on library services for distance education in Kenya observed that although a lot of effort has been made to satisfy the library and information needs

of distance education students this was being hampered by several factors. These included lack of institutional support, poor planning of distance education programmes, inadequate physical facilities and professional staff, lack of inadequate funding for university libraries and poorly developed internet infrastructure in the country.

About ten years later this situation has not changed. In a study by Wachira (2013), it was found that remote users (which is what distance learners are sometimes referred to) were not known by librarians serving in public university libraries, meaning therefore there is no specific services for them. In the same study it was also found that no specific policies governing remote users' services were in place. Librarians faced ICT infrastructure challenges and, where available, they had limited skills in both new technology and the ever changing user characteristics. The study concluded that it was necessary to re-design policies and service delivery processes to ensure access and use of resources by all users irrespective of distance or mode of access. This is vital since resources and services as designed were intended for on-site or on-campus users which seems to be the *modus operandi* in most universities in developing countries. The distance learner has unique needs which need to be catered for in a different approach, due to their being separated from the university, in terms of distance, geography and have challenges with time management. However, even when they find time to visit the libraries more often than not they do not find the information they require given the outdated materials available in most academic libraries. The distance learner also has no user skills as these are organized mostly for full-time students during orientation; while distance learners can report anytime of the year due to the unique programmes and work commitments. Added to this, is the apathy from mostly inexperienced staff, lack of an exemplary ICT infrastructure and lack of specific staff dedicated to their needs such as a distance learning librarian. The distance learners are also not aware of their rights as distance learners or the services they are entitled to which makes them shy away from demanding them due to lack of publicity and marketing of library and information services available for users.

3.3.6 Distance learning support and related technologies

Distance education has undergone major changes internationally. This is due to the advancement of technologies which has been innovative and thus influenced the delivery of both distance

learning programmes and library services especially in the developed world. The technological revolution brought in the World Wide Web (WWW) which has catapulted distance learning to the forefront of many more institutions of higher learning. Although distance education has been in existence since 1800s through correspondence and independence study courses (Gandhi, 2003:138), there is now the added convenience of taking the course through the Web which has tremendously boosted student enrollment in distance learning courses. The changing trends of technological advancement have also changed the profile of traditional college or university students fueling demand for distance education. More and more adults working full-time are now balancing family responsibilities and returning to university to pursue part-time or distance learning education (Gandhi, 2003). Distance education is also increasingly becoming an attractive option for working class people including housewives and mothers, low income individuals, and individuals with disabilities, military personnel (including retired) as well as rural people; hence requiring huge investment in all types of resources but mainly in ICT infrastructure.

According to Gandhi (2003), in the USA many universities including Maryland, Phoenix and others decided to operate on the premise that distance education will deliver education to people instead of people to education. This is done through the Web which has seen the pioneering of the concept of the virtual universities, that is, universities which can deliver courses without physical facilities. Nova Southern University which has offered distance education since 1972 is a pioneer in this field. Other prestigious profit-making elite universities such as Columbia Business School, Stanford, University of Chicago Business School, Carnegie Mellon University and London School of Economics are some of the institutions offering these courses sometimes through proxies such as the Cardean University.

As already explained, this rapid proliferation of distance learning programmes have tremendous implications for providing library services which is a requirement stipulated in the guidelines for distance learning library services developed by ACRL. According to these guidelines (which are revised and updated regularly), ACRL has reiterated that members of the distance learning community, including those with disabilities must be provided with effective and appropriate library services and resources. Although they may differ these resources and services must be

equivalent to those provided for to students and faculty in traditional faculty settings (ACRL, 2008). Presumably a traditional campus setting here includes and means those on full-time programmes and are on-campus literarily. In the international arena, this view is endorsed by many stakeholders as an accreditation requirement. This is especially since library support to distance learners is vital not only because of the curriculum requirement, but also because students and researchers needs require these, as well as information literacy. Although distance learners must be provided with equal services as full-time students, this is not yet happening in some institutions including in Kenya. This prompted Wasike and Munene (2012:102) to conclude that there has been a misconception of the fact that the existing library services are inherently appropriate for all users including the non-traditional students, without initiating a mechanism to find out whether the current setup satisfies all user's needs or not. There is therefore an urgent need for the library management to develop policies that are customer-centered. If necessary, they should revise any previous policies with regard to distance learners and non-traditional students to avoid, in order to amend what could be termed as academic discrimination.

In addition, the advent of new technologies has also changed the way we do things or even speak in our everyday lives or office communication. The 'e' words have now become our way of life. Words such as 'm-learning', 'e-learning', 'e-books', and 'e-journals' have become part of our everyday vocabulary. It will be argued however, that this is only happening in the urban areas where ICT infrastructure is in place and/or working, without power supply load shedding or interruptions. Technology has also brought in a new dimension and a variety of different approaches to distance education. It can safely be said that technology links learners, instructors and institutions which is the backbone of the distance learning system. Barron (2000) described distance learning technology as a system which offers innumerable benefits such as convenience, flexibility, effectiveness, and efficiency. Barron (2000) listed its many advantages as follows:

- Convenience: Distance learning technologies can solve space problems for both instructors and students. Advanced technologies such as the internet, e-mails, videotapes and telephones that can be used from anywhere.

- Flexibility: Learners using distance learning technologies can use many of these according to the time they have available. Technologies give learners the opportunity to consult, watch and review the materials any time and for as long as they want.
- Effectiveness: Students in distance learning are spending more time reviewing and studying materials transferred by distance learning technologies. It gives them a better opportunity to understand and review materials than the on-campus student. This has led some researchers to state that distance learning is equally or more effective than traditional education when the methods and technologies used are appropriate.
- Affordability: Some of the common distance learning technologies used by learners are available at no added cost to learners' budgets. Barron (2000:19) citing Casey, Dager and Magel (1998), earlier study stated that "over 99% of the homes in the United States have televisions and 65% are connected to a cable-TV service". It is therefore easy for these homes to watch a videotape or public broadcast television, especially as almost all homes have access to a telephone, enabling the use of voice-mail and audio conferencing.
- Multi-Sensory: Distance learning technologies help learners learn in different formats and by using multiple devices. These devices or technologies are intended to meet each learner's interest and ability. This benefit of distance learning technologies will not be useful unless distance learning courses are well designed by offering learners a wide range of media to use.
- Interactivity: The most advanced distance learning technologies offer more interactions between students and instructors and among students themselves. These technologies may solve common problems facing some students, such as feeling embarrassed in face-to-face study. They can allow learners to participate in a convenient atmosphere.
- Equity: Distance learning technologies are helping governments to deliver training and education to those who need it in rural areas on an equal basis with those in cities.
- Accessibility: Distance learning technologies help developed very quickly during the past decades. These developments have helped students to access their institutes' support systems (including the library, catalogues and databases of other libraries), and to use other services available to on-campus students.

From these myriad benefits, above it can be concluded that distance learning is of huge benefit to a large sector of any country's citizens. It will uplift their social and economic status and transform them to a more informed and knowledgeable citizenry. It can therefore be deduced that distance learning is an investment waiting to be explored or a treasure unexploited and is here to stay because the benefits far outweigh any disadvantages. The only way therefore is to move forward and implement it in the best way possible using the best financial, human and management practices available. This includes: the crucial support required for academic libraries whose role is necessary for the quality of these distance learning programmes.

3.3.7 Academic libraries support for distance learning

As is the practice in most countries and institutions of higher education, effective learning entails the provision of an exemplary library and information service. This is because ideally the library is the nerve center of any learning and academic development and research due to the resources and knowledge that lies therein. It is this resource center that transforms information into knowledge then supplies it to its users for learning, teaching and research purposes. In supplying this service, equity should be the keyword so that all users (including academic and non-academic, on-campus or traditional students and distance learners) receive equal support. Providing users with library and information services is an important task for any library. These services are not just another support services. As Fahad (2010) has stated; they are a necessary component of any educational experience and an integral part of the lifelong learning process. The practice in Kenya and probably in some developing countries where library staff are placed under non-academic terms of service is only demeaning. It also has a demotivating effect which should not be the case in such a key department which is actually the heartbeat of any university the world over.

In an attempt to stress the importance of the academic library in ODL, it is imperative to revisit once more time and delve a little deeper into the concept of the distance learner. In a National Education Association survey report cited by Gandhi (2003: 139), a distance learner was described as any student who lived an hour away from campus. In other words, this applies any student who is not or does not reside on-campus or any institutions on-campus and cannot access the physical collections and in-person services offered by the staff on their campus libraries. This

becomes more pertinent because, as has been stressed in various studies, the needs of distance learners are ideally the same as those of on-campus students except that they need information whenever and wherever they are at their convenient due to their unique study circumstances being far removed from the university or campus.

Similarly, several other studies including Fahad (2010) have noted that information services are an essential part of the educational provided. An example is given of the Open University (OU) which supports this view in their students' handbook, which states that using libraries is an essential part of education. Fahad (2010) citing Simpson (2002) also offered two models both old and new that provide for distance learning as follows:

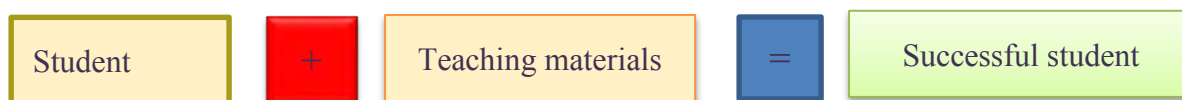


Figure 3.5: Old structural model of providing distance learning

Source: Fahad (2010: 76)

This model apparently is commonly used in developing countries. This is the one that is mostly used in universities in the developing world, including some of the universities in Kenya. It is assumed that once there a student and teaching material, it is enough to make a successful student. However recently there have been several other models such as Figure 3.6 below which stressed that double effort was required for the success of the students:

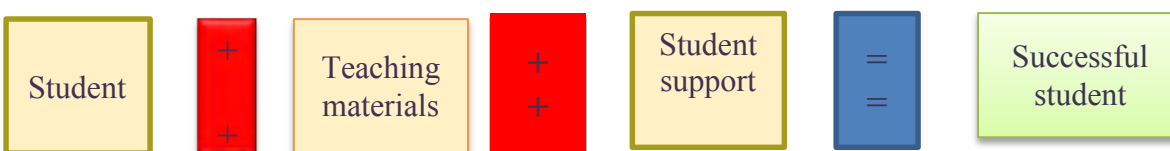


Figure 3.6: New structural model of providing distance learning

Source: Fahad (2010: 76)

In this model, student support in various formats is seen as very important in the successful learning of students. However, the role of the library is obviously the main catalyst, although for this to be successful it needs a strategic publicity approach given the current context in Kenyan universities. According to Dermody (2005), distance learners are a unique target group for the marketing of library services because they do not visit the library that often or at all and it is

crucial to publicize and promote library resources and services available to them. It is also important to take a multifaceted approach and collaborate with the various faculties and relevant groups of the university such as ICT personnel and other relevant stakeholders. This is crucial for the process to be successful and of benefit to distance learners. This study concluded that promotional actions must include an understanding of the unique needs of distance learners, their expectations as well as their limitations and planners need to take advantage of this promotion or marketing potential available within the distance learning faculty. Ideally this is the best practice for distance learners and this is a standard procedure in the developed world. It is a process which the developing world and Kenya in particular should adapt for their own library and information services for distance learners.

In the developed world, the equity of library services are a pre-requisite for all university students, including distance learners. The format of e-libraries has been found best suited for the success of distance learning programmes. In order not to segregate distance learners with on-campus students, most universities have improved on how they serve their distance learners and have brought in various approaches in service delivery including online, thorough websites, blogs and wikis, open access and e-resources. Panda and Swain (2009) as cited by Fahad (2010) designed a model of success factors in e-learning which emphasizes the importance of the e-library in solving some of the distance learning challenges through e-learning.



Figure 3.7: Recent model for providing e-library and other support services to distance learners

Source: Fahad (2010:75)

In fact the role of the library cannot be overemphasized enough. An e-library would be the ideal solution even in developing countries, however with the perennial power load sheds and ICT infrastructure this remains a current challenge. However, it should be made more pertinent that the role of the library is not just to acquire and stock information. It actually has a more important role which is to organize the resources, make them available and easily accessible through well-organized information services and promotional activities that will meet the information needs of both the on-campus and the distance learners equally.

3.3.8 Information needs and information seeking behaviour of distance learners

In the introduction chapter, some key concepts and terms were introduced including information need and information seeking behaviours. Significantly information needs and information seeking behaviour seem to be inextricably intertwined concepts which have drawn the interest of researchers globally. According to Unwin and Bolton (1998: 11), Wilson is one of the earlier renowned researchers to have embarked on such research in 1978. Consequently Wilson has provided several descriptions, definitions and even reasons why people seek information. Mnubi-

Mchombu (2013:25) citing Wilson (2000) described information seeking behaviour as the purposive search for information as the need to satisfy some goal arises. According to Wilson (1997:36) people frequently discover information in everyday life for instance while watching television, browsing through a magazine without the direct intention of a need to find any specific information. Mnubi-Mchombu (2013:26) citing Wilson (2006:661) explained that an information user can use various sources to satisfy their information needs including their own colleagues in an organization or an information system, with a mediator which can be a human being or technology based like a computer terminal. The mediator can then use various search strategies in order to satisfy the needs of the information seeker, including e-resources and files to get the information.

Another study by Majyambere (2014) investigated the information seeking behaviour of Humanities/Arts international postgraduate students in public universities in KwaZulu-Natal Province, South Africa. The results, among other things, revealed that international postgraduate students had academic and personal information needs but faced challenges with information literacy, limited computer skills and lack of awareness of services available and or their rights to these services due to lack of policy documents. The study recommended improved general support to these students especially on information literacy, teamwork among relevant stakeholders but especially between the International Office and other relevant departments; and policy documents with clear communication channels to all stakeholders. This would make it inherently clear what is required of these key services providers and also students in order not only to raise their awareness but also their rights about their needs and services available to them. However, all people seek information to satisfy a need. In order for there to be an information need, there must be a formal motivation for that to occur.

Another prominent researcher, Kuhlthau (1993), suggested that information need in information science is often understood as evolving from a vague awareness of something missing. This culminates in locating the information that satisfies the need or understanding of the circumstances. Dervin and Nilan (1986) also described information as a gap in an individual's knowledge in a sense-making situation. In other words, ideally information is a requirement in our everyday life. If we do not perform our tasks satisfactorily there is a need for sufficient

information, hence the information need. Individuals vary in their search behaviours but ideally it is the way they articulate their information needs, seek, evaluate, select and use the information. At the same time, Kingrey (2002) perceives information seeking as involving the search, retrieval, recognition and application of meaningful content. It has also been argued that a search may be implicit or explicit where the retrieval may be the result of the specific strategies or coincidence which could result in the information being accepted or rejected midstream. The entire process may be carried out to its logical conclusion or aborted because there could be several other potential results. Consequently, the closeness and similarity between need and information (seeking) behaviour prompted Wilson (1997) to propose information behaviour as an alternative to information needs. Distance learners are basically concerned with the supply of an effective provision of library and information services that can satisfy these needs, given that mostly they study alone in isolation.

Although it has been mentioned that there is a dearth of literature on this subject, still various studies have been done in Kenya and other countries in the developing world on how these challenges can be overcome. These developments have brought into sharp focus the current status of academic libraries, the support they offer to distance learners and the strategies that are required to overcome them. As has been established, the information or library needs of distance learners are the same as those of campus students although distance learners' needs are unique due to their study circumstances and user expectations (Gandhi, 2003). One of the earlier studies which investigated distance learners' information needs and challenges stated that, as distance education continues to gain in popularity, focus is now turning to the role of libraries in their support for distance learning (Kavulya 2004:16). The study affirmed that distance learners need adequate library services if they are to gain quality education. While some effort is being directed towards that end this has been hampered by several factors. Key among these are lack of institutional policies to guide the supply of information for these type of learners, lack of partnerships between faculty and librarians in the planning stages of these programmes, poor planning of the programmes, inadequate funding, poor internet infrastructure and lack of adequate physical facilities and qualified professional staff among other challenges. The study concluded that the most critical factor for effective supply of library and information services for distance learners is a collaborative effort between curriculum planners, implementers, and

administrators with librarians. In other words, team effort right from the planning to the implementation stage is required. There is also a need for proper training for all staff involved in these programmes to make it clear what is required of them, adequate funding as well as an exemplary ICT infrastructure, which is really the future in the delivery of distance learning education in terms of appropriate skills in electronic publishing, web-design and web-based library services (Kavulya 2004:25).

Another study by Wasike and Munene (2012) which investigated the information needs and study behaviour of non-traditional students (also referred to as distance learners), with particular reference to universities in Kenya. The study found that while meeting their information needs was the responsibility of the library, students lacked time to study, experienced communication breakdowns, inadequate information resources and support from relevant stakeholders. The study also confirmed that most library collections and plans for library and information services were designed for on-campus programmes and do not therefore favour the needs of non-traditional students or distance learners and were without the involvement of librarians in the pre-planning stages to have distance learning positions or sections in most or all academic libraries. This key section for supporting distance learners is or should be one of the key features in libraries of universities that offer distance learning programmes. In the developed world such units have been in place for many years. This is supported by Unwin and Bolton (1998:108) and Dermody (2005:41), an Assistant Professor and Distance Learning Librarian at Saint Cloud State University at the time of the study. Their study recommended proper planning for distance learners for the growing demand for the library and information services across the universities. They added that the planning should not unduly disadvantage non-traditional students. The issue of orientation and experience or skills has also featured in some of the studies.

Chikono (2000:32) noted that students vary in their experiences of using academic libraries with a majority in need of certain skills that could enable them to successfully search for the information which they need. With orientation that mainly focuses on full-time students, librarians in Kenya need to re-think and innovate these orientation or user education programmes to embrace the needs of all students, including distance learners. A study by Maenzanise (2002) also confirmed that distance learners have unique information needs being far removed from the

university. Often in the absence of libraries, such students turn to their own work colleagues or people with whom they are familiar given that they study in isolation they require extra support. This situation can be attributed to the fact that distance learners are mostly from the working population who earlier missed access to public universities. Agalo (2008:7) noted that such adults are most likely technologically challenged. Thereforewhile studies by Anyona (2009), Fahad (2010), and Odonbonye-Obu (2013), among others, confirmed that ICT holds the promise in the delivery of distance education; due to a myriad of ICT infrastructure challenges the distance learner is left with no option but to use books as their most important source of information (Oladukun and Aina,2009:46). Even then other barriers from the libraries would be whether these books were the most appropriate sources for their information needs, given that most of these books were outdated.

Nwezeh (2010) stated that distance education is an evitable development in the evolution of education internationally. With this increased popularity, the focus now turned to the role of libraries which is an important tool in intellectual development in terms of resources for research, teaching and learning. The study discovered that distance learning students were not adequately catered for in the use of library studies. The study recommended that adequate planning should be made for distance learning students to avoid a situation where some of the students could graduate without ever having used the libraries. Fahad (2010) investigated the role of academic libraries in supporting distance learning in the Saudi higher education system. The results indicated that distance learners have unique needs. The country, through government support, was transforming traditional approaches into fully automated techniques through the implementation of e-learning via the internet. However, the library policies and rules lacked (or did not recognize) the right of distance learners to be served or supported. The results also revealed that there was little or no co-operation between academic libraries. Textbooks were the main source of learning and teaching. This made distance learners lose interest but more important there were no policies and guidelines on distance learners. The study recommended co-operation between academic libraries and administration, more funding, and the need to recognize the rights of distance learners. It also recommended new models as solutions including web-based supply and delivery of library and information services to distance learners.

Another study that had an impact highlighted the challenges of information needs for distance learners in terms of pre-planning, teamwork, facilities resources and funding was done by Wawire and Omboi (2010). In this study, it was revealed that university libraries in Kenya operate in an environment of tightened financial constraints, lengthy and cumbersome procurement procedures, are not innovative with ICT infrastructure or lack it altogether, have no adequate facilities, keep outdated resources and are staffed by semi-professional staff among other shortcomings. However, the greatest challenge was with the librarians themselves in their apathy towards the profession, challenging their passive role in the university ranks. The study concludes by challenging librarians to co-operate and present their problems to management, play an active and relevant rather than passive role in the hierarchy, accept especially IT change, present user-centered services but above all publish or perish. Another study by Gudo, Olel and Oanda (2011) investigated university expansion in Kenya and issues of quality education, challenges and opportunities. The study revealed that as university admissions numbers continue to swell, facilities are stretched to the limit, with few teaching staff amid diminishing teaching and learning resources, thus eroding the quality of education. The study recommended careful investment in physical facilities, teaching and research resources, innovative ICT and librarians collaborating with relevant stakeholders.

Wachira and Onyancha (2012) investigated serving remote users in selected public university libraries in Kenya. In another study, Wachira (2013) discussed support services for remote users in selected public libraries in Kenya. In both studies, similar challenges in terms of access, lack of finances and relevant staff and ICT infrastructure, facilities and outdated resources no longer desirable by students, were found inadequate but also that the services needed publicity and marketing. However, the most challenging issue which emerged from the Wachira (2013) study is the fact that to date some librarians still do not understand the concept of the remote user or distant user for that matter. Indeed, some members of staff were not aware that such users existed even as they were serving them in their libraries. The studies recommended the redesigning of policies that ensures equity of access and use to all users, regardless of whether they were remote, full-time or distance learners.

One curious development on these revelations however is the fact that while these challenges were being projected seemingly with a negative impact on the quality of education, some government officials were busy encouraging the general public to take advantage of distance education to improve their economic and social status. In Kenya the then Minister of Education, Kamar (2012) suggested that universities should indeed find ways of accommodating products of free education. The Minister urged universities to expand access to library resources in order to meet the growing need of university education, and if possible to start 24 hour learning programmes so that students who qualify are not left out. This is actually a positive and noble agenda. However, as found from these studies in order to deliver quality university education all library users regardless of their university status need access to information whenever they want it wherever they are; fast, easy and at their convenient time. It has also been pointed out that in a world where people can get money using computers, they should be able to get information out from computers as well. If this is the case, then the delivery of distance education and especially libraries need to be more innovative and exploit the advent of emerging education and library technologies for these services but above all implement, maintain and adhere to relevant standards at all times.

3.3.9 The role of e-learning and m-learning in distance education

It is difficult to discuss distance education technologies without mentioning e-learning. The reason for this is that it is one of the beneficiaries, if not the most beneficial, of technological advancement. E-learning is being projected as one of the latest unsurpassed methods to deliver distance education. It is widely used as an advancement method of delivering and spreading education. Through modern ICT, it has become possible for people to learn at their convenience using a variety of platforms. In particular, the internet has made e-learning opportunities available and enabled people to get higher education, learn new skills and become more competitive in the job market, sometimes from their sitting rooms at home. But e-learning is not necessarily distance learning. Since most distance learning programmes worldwide are now making use of e-learning technologies, it is pertinent to give an overview of its main features.

According to Fahad, (2010), e-learning is based on using technologies that can be operated to link distance learners with their institutes. This modern trend has increased the use of computers

and the internet as new technologies in delivering education to learners. In the same study, it has been recognized that educational materials delivered through the internet motivate students to make further use of the internet. By extension these students make additional use of the internet to discover new methods of navigating in order to find new knowledge related to their studies. It can therefore be concluded that e-learning has and can provide significant opportunities for distance learning students to engage in learning and acquire new knowledge in order to improve themselves.

Fahad (2010) citing Faherty (2002) gave an overview of approaches or modes that can be used to deliver e-learning as the following examples amongst others illustrate:

- Web-based Training (WBT): A browser based approach delivered via an intranet or internet. It has the advantage of being able to deliver dynamic data that can be update from a central location.
- WBT+Mentorship: Usually an instructor is available via e-mail chat sessions or by telephone. The Open University in UK uses this approach to support distance learners.
- Synchronous E- Learning: This involves both instructors and learners being in the same virtual classroom at the same time. The instructor teaches the remote learners via intranet or internet connection. They can interact through both audio and video.
- Asynchronous: This approach includes WBT but also includes recordings of synchronous sessions delivered via the internet on demand. The recordings can be controlled by the learner and replayed. This approach has the benefit of being available anywhere, anytime while still including the interaction of other students recorded during live sessions.

Other types or examples used in the delivery of e-learning include e-books, (texts, guides and workbooks), audio and video tapes, Webpages and Web-based forums, Bulletin Boards Systems (BBS) chatting facilities, video and tele-conferencing.

In Kenya, Ongwae (2013) agreed with other experts on the intricacies of e-learning in terms of forms, modes and benefits. He goes on to say that e-learning comprises all forms of electronically supported learning and teaching. It can also be referred to as the computer and network enabled transfer of skills and knowledge, whose applications and processes include

Web-based learning, virtual education opportunities and digital collaboration. In addition he concurs that content is delivered via internet, intranet/extranet audio or video tape, satellite TV, and CD-ROM. It can also be self-paced or led by an instructor in the form of text, image animation or video and audio. However, as mentioned earlier, while this innovative approach is being supported by governments in East Africa, Ongwae (2013) confirms that most countries are playing catch-up in the use of digital technology to make higher learning accessible to thousands of residents for knowledge and skills. Indeed with the decline of funding to public universities, many governments are being forced to review the existing policies in line with the increasing role of technology in the education sector. This confirms the notion that perhaps they are not ready to implement this emerging distance education using ICTs. Despite the ODL programmes being in high demand, a lot of work remains to be done before it can fully benefit distance learners.

It can therefore be deduced that while e-learning is an acceptable and an alternative option of acquiring the ever requisite degree for professional advancement among other reasons, lack of funding and ICT infrastructure remain a major impediment for e-learning. Governments, institutions and individuals at the same time must be wary of the many mushrooming online and distance learning programmes advertised aggressively through all types of media. More important however, the relevant accreditation authorities and regulators must be very vigilant and ensure the necessary framework(s) are in place to ensure that only excellent and value for money distance education programmes are offered.

As a recap to the provision of libraries services, it is also obvious that public libraries are the main sources of information for most distance learners. In view of this one would expect that public libraries would be very well equipped with the latest state of the art ICT infrastructure and recently published text books and journals if not e-resources. Sadly this is not the situation and indeed one study has labeled it as a challenging situation. Commenting in a survey by the Electronic Information for Libraries (EIFL) (2011), Musinguzi (2011); it was asserted that while libraries are essential and central to education in the modern world, East African Libraries (including Kenya) are in disarray in that they lack internet connectivity, have in stock only a handful of interesting books to read and are suffering from inadequate infrastructure hence

attracting fewer readers. This study concluded that public libraries, usually the fall back or main source of information for distance learners, but are a poor situation and the chances of accessing useful information by distance learners from these institutions remains elusive. In addition, a similar situation in academic libraries as confirmed by various studies already discussed (for example, Kavulya, 2004; Wasike and Munene, 2012) if somewhat on a smaller scale. This scenario leaves the distance learner with very few options or none at all in satisfying their information needs, a scenario that is not acceptable in modern academic trends. However, other countries are already embracing m-learning which is being hailed as the solution in recent times to the delivery of distance education and library services.

3.3.9.1 M-learning

Chandhok and Babbar (2011) investigated m-learning and m-libraries for distance learners at the Indira Gandhi National Open University (IGNOU) in New Delhi, India in light of the value of emerging mobile technologies. It is evident that mobile technologies have changed the way people do things and have made real time contributions not only to human life but also in learning and teaching by offering valuable possibilities in remote and distant parts of the world (Chandhok and Babbar, 2011:608). At the same time, distance education has undergone a rapid transition and evolution from print to e-learning to m-learning. While e-learning was the stage of moving towards total automation in using Learning Management Systems (LMS), m-learning is learning using mobile technology. M-learning is an extension and innovation of electronic learning more accessible for distance learners in their existing environments. It allows learners to be on the go or on the move while learning, and not at their normal place of study or classroom.

With technology becoming available everywhere, learning options continue to expand and distance learners are looking for flexible learning opportunities due to the constraints of time, family, work and mobility being far removed from the university. The suitability of m-learning has now become of age in some countries. This could also be a strategic solution to the constraints of access to university or higher education in developing countries, including Kenya. As mobile devices become more popular distance learners can access the Web through mobile devices such as cellphones, iPads or Pocket PCs. Distance learning can then be delivered through

the Websites where learners can search and browse the internet from anywhere. They can also use Short Message Service (SMS) service alerts on new arrivals in libraries for instance, SMS reference services, access to course materials, examination schedules and time tables and the Library Web/OPACS among other services. According to Chandhok, and Babbar (2011:639), other services include information access wherever and whenever, limitless access from Web-enabled cellphones, mobile data potentials from pocket PCs and smart phones; and interactive capability such as creating content and connecting to educational networks ‘while on the move’ in the ‘palm of their hands’; and location awareness which can help distance learners locate study places near their locations; seek directions to desired destinations and discover nearby peer groups, contacts and colleagues. M-learning also has the most valuable advantage which is the provision of a permanent source of power supply due to their long life batteries. These batteries can be charged at the learners’ own convenient time and place whenever required, rather than the abrupt power outages and load shedding known to disrupt e-learning and other e-resources used in campuses and central libraries in developing countries which inconveniences users and learners abruptly which can be very frustrating and stressful.

While distance learning embraced IT with enthusiasm; perhaps it is now time to consider m-learning as the best method to facilitate the delivery of distance learning education. Perhaps the time has now come for librarians in Kenya and other parts of the developing world to develop proposals for m-learning, and m-library services. In redesigning the existing e-services already in place including e-learning, it is pertinent for librarians to examine opportunities for innovation in the areas of content, systems and tools, services and the environment; both physical and virtual before proposing any models for mobile device based services (Chandhok and Babbar 2011:642). In planning these m-services in the academic libraries, the librarians need to establish through user surveys the specific needs of their clients and address them appropriately including the levels of the services required. In addition, there is need to propose relevant policies, standards and guidelines to avoid any adverse impacts as is happening in some of the academic libraries at the moment in the delivery of library and information services to satisfy the information needs of distance learners in Kenya. In this manner, the impact of the challenges and barriers on services to support distance learners in academic libraries in Kenya will be reduced.

3.3.10 Standards and guidelines for distance learning education and university libraries

As distance education continues to be the preferred option for most people in developing countries, this system needs to be accepted by all stakeholders and urgent steps taken to streamline and plan for it properly. The developed world developed positive and relevant procedures, guidelines and standards which have been tested over a long period of time and continue to be reviewed and innovated in line with the emerging issues. It would perhaps be prudent for the developing world to assess and borrow some of these best management practices from the international standards and guidelines and adopt them for their own implementation.

3.3.10.1 International standards and practices

In the USA, certain guidelines and standards have been in place since 1963 (ACRL, 2008). However, due to the dynamic development of ICTs coupled with the sudden increase of distance learning programmes, there is constant need for as regular revision of the guidelines and standards in order to maintain quality assurance. The ACRL in the USA has the responsibility of maintaining a close check and ensuring that certain standards are followed by institutions offering or planning to offer distance learning programmes. These guidelines and standards are regularly revised (ACRL, 2008).

These standards and guidelines for distance learners' library services are founded upon the philosophy of the bill of rights for the Distance Learning Community (DLC). Along with this entitlement principle, standards are also founded upon the precepts such as access for achievement for superior academic skills, direct human access availability for distance learners, mandatory fiscal support by the institution, technical linkages such as computer facilities, user education, support for people with disabilities and information literacy among others. In addition, according to these approved standards, it has been made very clear that every student, faculty member, administrator, staff member or any other member of an institution of higher education is entitled to the library services and resources of that institution, including direct communication with the appropriate library personnel, regardless of where they are enrolled or located in affiliation with the institution. Therefore academic libraries must meet the information and research needs of all these communities wherever they may be. This principle of access

entitlement as applied to individuals at a distance is the undergirding and uncompromising conviction of the standards for distance learning library services (ACRL, 2008).

According to these standards, it has been made very clear that the access entitlement principle applies equally to individuals on the main campus, off campus, in distance learning or regional campuses (sometimes also called offshore or satellite campus) programmes; or the absence of any physical campus. This entitlement applies to all public, private, profit and non-profit academic institutions in the USA. This means that the principle applies across the board. It does not discriminate courses taken for credit, or non-credit, or through continuing education programmes, as well as courses taught face-to-face in classrooms, in remote settings, or through any medium or any other means of distance learning.

3.3.10.2 Kenyan standards and practices

As mentioned earlier in Kenya the university education regulator is CUE. This regulator works closely with the Ministry of Education and other relevant stakeholders to ensure that university education is of quality and that standards and guidelines required have been approved. Any university or institution of higher education needs a letter of authority in order to implement any programmes apart from a public university and herein lies the dilemma. The process of establishing a public university is different from that of private universities and technically only requires the approval of the President. Most of the universities in Kenya initially operated as national polytechnics and a number of these were upgraded to university status in 2012. The actually library standards guidelines were produced in 2007 (CHE 2012:1). These standards were revised in 2012 and again in 2014.

Although the 2012 Standards and Guidelines for University Libraries served the establishment and development of libraries well they seemingly favoured mostly full-time students. These documents do not make it specific for ODL or the non-traditional students provided, but only briefly state that:

“The university shall provide adequate resources to support open and distance learning library services and shall provide facilities, equipment and communication links, sufficient in size, number, scope and accessibility to

reach all and to attain the objectives of the ODL programmes which should be designed to ensure reliability and sustainability (CHE 2012:13)”.

However, the revised Standards and Guidelines University Libraries 2014 are more detailed with specific schedules and standards for academic programmes, and ODL libraries and e-learning (CUE 2014). The guidelines have also offered providers commitments and specific standards for specific challenges or sections of the services. A few examples are as follows. ODEL/STD/07&08 deals with ODL regional centers and expected outcomes in terms of reading and seminar rooms; library and computer rooms among others. ODEL/STD/09 deals with collaborative arrangements for delivery of open, distance and e-learning to mention a few. The Standards and Guidelines for University Libraries (CUE 2014) have covered all the vital or key areas of an exemplary library service. LIBR/STD/02 deals with the resources required for learning and teaching, LIBR/STD/03 captures the ICT resources and Infrastructure, LIBR/STD/04 organization and accessibility, LIBR/STD06/07 deals with facilities and staffing and LIBR/STD 08/09/10 provides for administrative structures, library budgets and information literacy and competency among others. On paper, this is a very good development and a comprehensive document which can and indeed will go a long way in serving the university libraries for a long time to come. However, as in the developed world, it needs consistent revising and updating in order for the guidelines to remain relevant. Above all the standards need to be crafted in a way which will make them mandatory and necessary to implement before any programme begin because as they are currently universities’ can and routinely do ignore such standards (Wawireand Omboi, 2010: 151). CUE needs to ensure that universities have put all the facilities in place and that only after inspection and approval can programmes begin and not before to avoid a situation where they have to discontinue them after they have already started. In addition, this approach would also avoid a situation where the Education Secretary had to advise the CUE to perform its functions properly for quality purposes, as demanded by professional bodies (Wanzala, 2015).

3.3.11 Recent academic developments and their impact on library services

Kenya, like most developing countries, has its own share of challenges in the provision of libraries and information services in institutions of higher education, given the recent academic

developments. In the past, not much effort was directed towards the inclusion of library and information services resources in the initial stages of pre-planning or starting a university. This anomaly prompted Wawire and Omboi (2010:149) in their study to state that no perfect establishment and development of a university can be achieved if librarians are not involved right from the initial stages. Indeed it is the informed view of this researcher that it should be a standard procedure to involve a senior information specialist in the initial or inception stages of planning or implementation committee of any university so that this crucial department which is the heartbeat of a university is placed in its proper place right from the beginning.

The trend has been that all the planning is done by management. Much later the librarian position(s) were advertised. After this stage that the librarian became part of the senate and various other committees and then began to get more involved mainly in the staffing and collection development albeit in a small way. The reason being most of these activities were predominantly done by the procurement personnel who control all the procurement activities of universities in Kenya. This has resulted in many malpractices in the procurement of goods and services due to the ever lucrative 10% kick back. This resulted in sub-standard purchases at inflated prices or non-delivery of some supplies altogether. This resulted in some deficiencies not only in the library but in other departments as well. These slow procurement procedures, which have been necessitated by the Procurement Act 2005, and were meant to ensure equality and efficiency has made procurement of goods and services a preserve of the procurement department thus encouraging corruption.

Wawire and Omboi (2010:151) stated that while the Act was meant to ensure equality and efficiency, it has made procurement of information resources among others a tedious and time consuming exercise. Furthermore, information or supplies required urgently are never acquired on time and more often than not when the procurement personnel are finally actually ready to do the purchase, it will either be unavailable or out of stock costing the institution more money in re-sourcing once more. Even in a situation where the deputy university librarian is proactive and offers a comprehensive blueprint or professional plans on most activities involving the library, more often than not these are routinely ignored. Arguably this may not be the trend in all universities, but it is common practice in most universities. Predominantly it is always the

Procurement or Supplies Officer who has the final say regardless of the consumer departments' views. This Act perhaps should be reviewed to ensure that it helps in the efficient running of the procurement of goods and services which should be a team effort involving all stakeholders.

However, with recent changes both in government and education administration and management of the education sector (including the new constitution and other developments in Kenya) the situation is set to improve somewhat but there are still a multitude of issues which need attention. As demonstrated in the introductory chapter, these challenges have become more prominent with not only the upgrading of various colleges to full status universities but also with the proliferation of distance learning programmes. Recent figures from the CUE in their Newsletter of September-December, 2014 (CUE, 2014) show that by 24 October 2014, Kenya had the following universities:

Table 3.3: Recent university statistics in Kenya

Universities	Number
Public chartered universities	22
Public university constituent colleges	9
Chartered private universities	17
Chartered private university constituent colleges	5
Universities with interim letter of authority	13
Registered private universities	1
Total	67

Source: CUE (2014)

This is remarkable and a much accelerated development in higher education for any country by any standards. The fact that a majority of the upgrades were done swiftly at the beginning of 2013 throughout 2014 has a bearing on standards and quality in education as well as for libraries. This is made worse by the fact that all universities are officially expected, as a matter of course if

not policy, to begin income generating activities to supplement the meager resources from the central government. This is a monumental undertaking by any standard and in spite of the gallant efforts of staff on the ground to meet deadlines and the meticulous scrutiny of CUE for this purpose whenever they visit for inspection; it would seem that this adventure has strained especially newly upgraded universities' resources, thus compounding the ever present challenges of these libraries and other support services.

It is possible that there are likely to be even more universities, both public and private. As numbers continue to swell, the quality of education and services to students becomes critical and requires immediate re-thinking and urgent attention (Gudo, Olel and Oanda, 2011:203). The emerging challenges include shortage of physical facilities, teaching and learning facilities for research, library resources, students' well-being and ratios of lecturers to students. To accommodate the increased student enrolment in Kenyan universities, the immediate requirement would be to improve the capacity of teaching staff and integrated technology. This would facilitate quality of delivery of both teaching and learning and enhanced library services to distance learners given their study circumstances. The library as the nerve centre of any university requires even more urgent attention and re-thinking. Libraries require adequate space for the swelling numbers, an exemplary ICT infrastructure, current printed and e-resources, and professionally trained staff to carry out the library functions effectively.

The study by Gudo, Olel and Oanda (2011:213) revealed that despite the pressure to admit more students, public universities do not have adequate capacity to do so and that the demand for university education exceeds the capacity of the public university to accommodate all the qualified candidates. This has in turn negatively affected nearly all the university services resulting in a further decline in the quality of university education in Kenya. The study concluded that while quality university education is achievable, it requires re-thinking of the financing including the students loan scheme; co-operation and collaboration between the government and the private sector (including private universities as equal partners); but above all investment in modern IT to enhance the learning and teaching in universities in Kenya. The last suggestion is significant given that distance education has embraced ICTs with open arms for delivery of distance education and library resources using technologies as mentioned earlier e-

learning and m-learning are emerging as the catalysts that will catapult distance education to new heights.

3.3.12 Benefits and challenges of distance learning

Despite all these negative developments, there is an assumption that the benefits of distance learning far overshadow or outweigh any negative aspect of distance learning, hence the need to continue with the current system and perhaps to look at the whole picture positively. It has been argued that since the advantages far outweigh the disadvantages, it is best that distance learning programmes are implemented anyway. Most universities are continuing with the implementation of these programmes given the various socio-political and economic demands and benefits.

According to Meduri (2006), equal opportunities for higher education have become an important ambition for modern-day developing nations. The open universities have become powerful instruments for higher education development in modern societies and are considered to be a great educational innovation of modern times. The founding of open universities marked the beginning of a new and prestigious era in the history of modern higher education and ideally was the signal of the new educational revolution. Coupled with this are the developments in communication technologies. These have enhanced and accelerated the potential and utility of open and distance education and universities which brings into sharp focus the issues of quality and standards among other challenges.

As numbers continue to grow, Kenya's universities, like their other East African Community (EAC) counterparts, are facing a growing challenge as well, namely the quality of learning. As noted earlier, concerns are also growing across the region that the quality of learning is degenerating faster than ever before. The report by Mungai and Mwaura (2014) was also supported by Mayunga Nkunya, the Executive Secretary of the Inter University Council of East Africa (IUEA) who was quoted in the same report as saying that the higher education system was growing too rapidly in the EAC region thus compromising the quality of learning, and that it is clear the region was not prepared for such rapid growth. Ayiro (2015) attributed the challenges to various factors such as migration of highly skilled staff and employment in excess of non-academic staff due to skewed human resources policies; demands for access and social equity,

less funding resulting in overcrowded libraries and outdated books, demographic changes among academics, inefficiency and ineffectiveness.

Other studies have also given an overview; suffice to mention a few as examples in summary. The ICDE in its briefing on ODL policy review found that the main challenges were a lack of ICT infrastructure that can deliver the capacity and services for distance learning including online programmes, lack of regulatory frameworks and accountability among others. In some countries including Kenya the regulator may be in place perhaps but the regulator is not performing to expectations, as stated recently by Professor Kaimenyi, the Cabinet Secretary (CS) for Education, (Wanzala, 2015). This is despite the proliferation of traditional educational institutions which have transformed themselves and are now offering open and distance education and the Massive Open and Online Courses (MOOCs) (ICDE 2012).

The study by Anyona (2009) is of the same view that while distance learning holds the promise, it faces many technological and communication obstacles and constraints such as connectivity and escalating costs. Using the International Telecommunication Union (ITU) statistics, the study found that Africa has less than two main telephone lines per 100 inhabitants and less than 0.52 per 100 in Sub-Saharan Africa as compared to 50 main telephone lines per 100 inhabitants in Western Europe. The situation is worse in rural areas with less than 0.06. Admittedly this was sometime in the distant past, but even recent checks on the current ICT infrastructure reveals that while there has been a modicum of recent developments, it is not enough to have an impact especially on the required and necessary distance learning ICT infrastructure.

Although it can be argued that the current situation on connectivity has somewhat improved, it is this researcher's view that most of the improvement is on the acquisition of cellphone sets by individuals (including in the rural areas) but not on the connectivity of telephone lines. This is good for m-learning, another concept of distance learning which seems to be the current or developing trend in the delivery of distance learning programmes in developing countries but already in use in some of the developed counties. In the meantime the sight of the famous red/green telephone booths, famously known as 'call boxes' have all but disappeared more so in Africa and Kenya in particular, due to this development. The queues that were the order of the

day in telecommunication offices for potential customers requesting landline connectivity have also disappeared, causing massive unemployment as well.

The study by Anyona (2009) also concurred with the ICDE on other issues as well such as the lack of policies to provide regulatory frameworks and lack of computer access connectivity which also remains very expensive. This is closely related to the financial availability or lack of it. Another view held by other experts is the open secret on corruption. It has been alleged that more often even when funds are available, they are often misappropriated due to corruption or the goods purchased are sub-standard due to collusion with the procurement staff in order to facilitate the 10% kick back. More often than not, the end user individual or department is hardly consulted or involved in the purchasing processes of such goods resulting in a 'take it or leave it' scenario since the goods will have been purchased anyway. When the end user decides to reject the goods, the goods may end up in the stores for long periods of time and outlive their shelf life or are re-issued and charged to other departments surreptitiously leading to further inefficiency, especially for ICT infrastructure related goods.

In view of observations from the preceding studies, it can be deduced that the main challenges facing distance learners is mainly twofold. On one hand, there are those ICT infrastructure challenges faced by both the distance learners and their lecturers in terms of delivery of these programmes. Such challenges would include (but are not confined to) modern and innovative methods of delivery such as the first generation web-based tools such as m-learning, e-mails, chatrooms and discussion boards among others to online and e-learning and other second generation web-based tools that promise interactivity for the next level such as weblogs, wikis and podcasts also called vlogs when used with video or audio blogs if audio only is used (Beldarrin 2006). On the other hand, there is the challenge which these learners face in terms of their information needs and lack of ingenious resources in academic libraries to augment their learning. Such innovative learning support models include but are not confined to e-books, e-journals and m-learning among others, which then bring into sharp focus the issues of virtual libraries, virtual learning and other learning technologies. All these will ultimately require very sound ICT infrastructure to support distance learning technologies all-round.

3.3.13 Summary of the chapter

This chapter reviewed the literature relevant to the study which revealed that there is an explosion of distance education globally and locally due to its importance and choice as an alternative to conventional education. An international overview and insight to procedures and standards were presented as adopted in the developed world through various official associations and organizations as well as current trends. Current practices and concepts of higher and distance education in developing countries including Kenya were offered, and the information needs and behaviours of distance learners discussed. Literature available revealed that some studies have been conducted in the developing world, their findings used to address the information needs of distance learners. It also emerged that the main challenge is the implementation of the findings and the need to adhere to the guidelines and standards supervised by an active regulator before the implementation of any distance learning programmes. The reviewed literature demonstrated that there is a lack of customer care for distance learners in Kenyan higher education institutions. Since 2013 there has been a proliferation of both public and private universities in Kenya making it the largest academic economy in East and Central Africa. This has brought into play collaboration with many training institutions whose academic programmes are questionable. Many satellite campuses (universities) in the remotest parts of Kenya bring into sharp focus the quality of education being delivered in some of these institutions of higher learning. In addition most universities are required to implement income generating activities. The obvious choice for most of the universities has been the launching of distance learning courses. The next chapter will discuss the research methods adapted for the study.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 Introduction

In this chapter, the research methodology used in this study is presented. The chapter includes a definition of research methodology, research design, area and population of study, sampling procedures; how data was collected and administration of the instruments used. The chapter also presents the validity and reliability of the study, ethical issues, evaluation of the methodology and concludes with a summary. This approach is informed by the fact that research as an academic endeavour, is a systematic process of gathering data analyzing and interpreting it in order to increase an understanding of the study problem. In simple terms, research methodology means the design, strategy and the plan of action required to gather and analyze data (Wheeldon and Ahlberg2012:5).

4.2 Research methodologies

Teddlie (2009:21) has defined research methodology as a broad approach to scientific inquiry, specifying how research questions should be asked and answered. One could add that it is a systematic process of solving the research problem. In other words, it is a standard practice for processing new knowledge. Ideally it should include worldview considerations, the preferred research design, sampling and data collection strategies. Perhaps the best explanation is the one preferred by Babbie andMouton,(2001:74) cited by Majinge (2014) in which research methodology is referred to as the methods, techniques and procedures that are employed in the process of implementing the research plan or research design. Crotty (2005:3) cited by Fahad (2010:94); introduced methodology as the “strategy or plan of action, process or design of lying behind the choice of particular methods and linking the choices and less of methods to the design outcomes”.

Nsibirwa (2012:144), citing Kumar (2005:19) captured it well by stating that: “the path to finding answers to your research questions constitutes research methodology”. According to Kumar (2011:94), a research design is a “procedural plan that is adopted by the researcher to answer questions validly, objectively, accurately and economically”. Put simply, it is a plan

informing how a researcher not only intends to conduct the research but also the strategy of obtaining answers to the research questions. No matter what kind of research is being done, there must be a properly developed and use of a sound research design. A study by Nsibirwa (2012:147); compared research design as a process of designing and building a house. There is need for a solid foundation and a good or sound plan on the way forward in order to achieve the best results possible. A simple definition is offered by Joyner, William, and Glatthorn (2013:115) who states that “research design is a specific plan or a recipe for studying the research problem” In this study, the following statements are commonly found as in most or all designs.

- A research design should indicate if the research is quantitative, qualitative or mixed.
- Research design should identify both the general and specific. For instance, if it is a case study, it should also specify the subtype such as ethnography.
- It should indicate where and when the study will be conducted and whether access has been assured.
- It should indicate and identify the participants who will be involved in the study.
- It should explain the methods and instruments that will be involved in the study, whether these will be documents, interviews or observations.
- Finally, a research design should explain how data analysis will be done. If it is a mixed research approach which is preferred nowadays by most institutions for both Master and Doctorate dissertations, both quantitative and qualitative approaches require detailed explanations Joyner, William and Glatthorn (2013:116).

It is worth noting that the value gained from qualitative research has generated considerable interest in this type of research methodology. Joyner, William, and Glatthorn (2013:116) recently re-affirmed that most institutions now require Master’s dissertations and Doctoral theses to contain both a qualitative and a quantitative component. It can therefore be said explicitly that the term mixed method research approach has become synonymous with this type of approach. The qualitative element can be used to verify, support or supplement the collected qualitative data. This study preferred the mixed methods research approach.

4.3 The need for mixed method research

In Chapter Two, section 2.2.1, the need for both quantitative and qualitative methods of approach was discussed. The reason given for this was that it adds value as it collects exhaustive information and data. Quantitative data shows what is happening while qualitative data informs why it is happening. In conducting research, a researcher can select a quantitative approach, a qualitative approach or both quantitative and qualitative approaches. Sometimes these approaches are viewed as opposing one another while in fact they actually complement one another. This study opted for both qualitative and quantitative approaches hence the mixed method approach. Apart from being the required approach by most institutions for Masters dissertations and Doctoral theses they also serve to complement each other as each has a different set of strengths and weaknesses (Mnubi-Mchombu 2013:85). In view of this, the researcher was of the opinion that this approach would add more value to the study.

4.3.1 Qualitative research

In the concept of qualitative research the belief is that it provides a cautious descriptive account of the research problem. Given that this study is about distance learning and the information environment, a qualitative approach will provide a descriptive account of this educational phenomenon and as a result offer a deeper understanding of this sudden surge or explosion of distance learning education; not only in Kenya but also in other parts of Africa and globally. This narrative approach in qualitative research is also sometimes known as explanatory research (Teddlies 2009:24) in which information is generated about unknown aspects of a phenomenon to gain a better understanding. This is because it is presented in the form of texts, images or written words. According to Mnubi-Mchombu (2013:85), “Qualitative research’s main purpose is to reveal the nature of certain situations processes, systems or people and deals with non-measurable aspects of data”.

Globally, other studies have also argued that whereas validity is important in qualitative studies, trustworthiness can be used as a substitute for this purpose (Teddlie2009:26). This trustworthiness apparently is the extent to which the inquirer can persuade audiences on the fact that the findings are worth paying attention to, in other words that they are credible. Qualitative research also tries to focus on why participants react the way in which they do (Connaway and

Powell, 2010:77) and could apply holistic and natural approaches which tend to give more attention to the subjective aspect of human experience and behaviour. This method is useful for gathering data about information users, behaviour and information needs which confirm their preference in basic research in LIS in recent years (Connaway and Powell, 2010:78).

4.3.2 Quantitative research

While there seems to be a departure from quantitative to qualitative methods of research in LIS, the quantitative approaches have not been abandoned altogether. It would seem like a combination of both is more effective in a study of the information environment of distance learners such as this one. This is because a quantitative approach has certain aspects which also add value as researchers seek to understand the facts of the investigation.

In quantitative research or studies, results are mostly obtained through facts such as statistics and mathematical techniques (Ngulube 2005:130). This approach, according to Mnubi-Mchombu (2013:86); constructs in a more exact and formal aspect and the procedures and concept are more rigidly defined. In this type of research it is being argued that concepts and variables are not only important but that they also establish or determine the validity of the findings. In addition, quantitative research does not involve changing or modifying the situation under investigation or determine cause and effect relationships, but rather employs structured techniques of data collection which allows data quantification. Teddlie (2009:256) captured the definition of the data analysis strategies of quantitative data very succinctly by stating simply that “quantitative data is analysis of numeric data using a variety of statistical techniques”.

4.3.3 Justification for mixed methods approach

One other reason why postpositivism was selected for this study was because it emphasizes the hallmarks of humanity in this approach (Fahad 2010:92). Furthermore these types of study approaches are more interpretive which has led to emphasis on meaning experience and knowledge as multiple and rational. This kind of approach is also suitable due to its accommodation and suitability in the mixed method research, which is exactly what this kind of study requires.

The notion of employing both qualitative and quantitative methods is sometimes referred to as triangulation (Mnubi-Mchombu (2013:87).Triangulation refers to a research strategy which involves more than one research method, technique or style of inquiry. According to Joyner, William and Glatthorn (2013:123); triangulation is used to mean a process of using multiple perspectives and data resources. This study adapted a combination of methods which facilitated the connection of different kinds of data and this builds confidence in reaching conclusions (Majinge 2014:1012).

4.4 Area of study

The study was carried out in two administrative regions namely Mombasa and Nairobi counties. Two universities were studied in the region namely Technical University of Mombasa (TUM) in Mombasa County and University of Nairobi (UoN) in Nairobi County. Both universities were selected due to their proximity to the city centre and ease of access. In 2013 and before President Mwai Kibaki left office, he upgraded various university colleges in Kenya to over thirty (CUE, 2014). In view of this, other reasons were also considered in selecting the two universities. University of Nairobi was selected because it was the first to start distance learning programmes, formerly called correspondence courses in 1963 (UoN 2014). Mombasa Technical University was one of the newly upgraded universities in 2013, although it offered part-time and distance learning programmes even before that as it is one of the new universities. It was assumed that this approach would provide a blend of experiences. By selecting these two institutions, the study would give an insight into the challenges that university administrators face in implementing distance learning programmes and the information needs and behaviour of distance learners.

Mombasa Technical University was also selected because, being relatively new, it was deemed to be venturing into new territory and hence lacking in experience in distance learning when compared to University of Nairobi. Permission to carry out the research was sought and granted by or through the Chief Executive Officers (CEOs) also known as Vice Chancellors (VCs).A decision was made to select postgraduate students only in distance learning programmes due to the fact that they were deemed to have had initial experience in the use of libraries as

undergraduates and hence would be able to better offer an insight into their information needs, behaviours and the challenges that they had faced over the years more than the undergraduates.

4.5. Population of the study

In terms of research, the population is the number of all people or objects who are potential participants or respondents in which a sample can be drawn. Mouton(1996:134) offers a general definition of a population as a collection of objects, events or individuals having some common characteristics which the researcher is interested in studying. On the other hand; O’Leary (2010:161) defines population as the total membership of a defined class of people, objects, or events. In terms of research, the goal is often to understand a population or a representative sample of what a particular group of people do or think. However, it is not usually possible to reach out to everyone in order to collect data from every element within a population (O’Leary, 2010). Studies may sometimes involve populations in their entirety due to a number of reasons. Population may also be too large or may contain elements that cannot be identified or cannot be accessed. The ultimate goal however is to be able to apply or produce credible findings.

The population for this study included two groups of respondents in two universities. One group consisted of librarians, including the deputy university librarians also known as Library Directors in some universities and subject librarians who, in an ideal situation, should have been distance learning librarians. The choice of the Deputy university librarians was ideally for the purposes of administrative and management issues while the selection of the subject librarians was due to their handling and assisting or those who deal with distance learners (DLs) in the current setup in these libraries. The other group of people consisted of students in distance learning programmes in Education at the University of Nairobi and Masters of Business Studies at the Technical University of Mombasa. The student group was comprised of master’s students or postgraduate diploma holders only. The reason for this was because they were deemed to have been exposed to the use and challenges of information needs through either their undergraduate years or their use of the libraries over the years as students and their challenges in accessing information. This is important because a sample of a population should contain elements, subjects or members that possess a specified set of characteristics that define it (Teddlie, 2009).

Due to constraints of time, access and resources, the study, was carried out at the main campus of TUM in the Tudor area of the county, although TUM has a campus in Lamu county which is an island about 500 miles away. During the study period, there were Al-Shabab attacks. Al-Shabab is a terrorist cell of the main Al-Qaeda terrorist organization which has been perpetrating terrorist attacks all over the world. During the period of this study, Lamu Island had frequent attacks where many people lost their lives making it a no go area. The other TUM campus is situated in Kwale County which is infiltrated by the Mombasa Republican Council (MRC) operatives who are demanding separation from main land Kenya. In this county, there are regular and random clashes between state security agents and MRC operatives making frequent and random arrests the norm rather than the exception. This also made it a no go area.

Despite these setbacks, the researcher was able to obtain some samples. As the study used a mixed method approach, the probability sampling offered the specified set of characteristics designed; and the purposive sampling offered the important information that the sample can provide that could not be obtained from other sampling choices (Teddlie 2009:170). At the University of Nairobi, the study was carried out at the main distance learning campus known as the Kikuyu Campus and other neighboring areas such as the Central Business District (CBD) at Anniversary Towers and at Ngara Girls High School. It should be mentioned here that the University of Nairobi being the oldest university in Kenya was the first university to establish what was then known as Extra Mural Studies (EMS), the precursor of the current distance learning (DL) education in Kenya. The first EMS studies department was established at the Nairobi University College in 1963 and the current centre then known as the Adult Studies Centre (ASC) was opened in 1966 at Kikuyu Campus (UoN, 2014). The concept of the extra mural center currently known as distance learning has since spread all over Kenya. There are now centers in Mombasa, Nakuru, Nyeri, Kakamega, Kapenguria, Meru, Garissa, Kisii, Nairobi, Kisumu and Kikuyu. Due to the number of DL centers scattered all over Kenya, it was not possible to cover all of them for this study. Due to ease of access and their proximity to the city center therefore, the study was carried out of at the Kikuyu Centre, Anniversary Towers in the Central Business District (CBD) and at Ngara Girls High School which is 30 minutes away from the CBD by taxi.

4.6 Sample size

In research, the population of the study is determined by the nature of study but it is generally accepted that the larger the sample the better; Powell (1992:79) has alluded to this as the general rule of thumb. However, at the same time it has been observed that there is no point in utilizing a sample that is larger than necessary because it can result in an increase in time and money needed for the study (Powell, 1992). Perhaps the best approach would be to strike a balance of a sample size that is not too large but also not too small. Although Ngulube (2005:134) argues that a sample that is too small reduces the use of the results, on the other hand it can be argued that a sample that is too large could result in a waste of resources. Kumar (2011:197) has also posited that as a general rule when there is a larger sample size, the findings will be more accurate. However, he has also argued that if all the elements in a population are identical, then the selection of even one will provide an absolutely accurate estimate since the population of this study is homogeneous. Therefore with similarity in respect to the characteristics, it was decided that a small sample would provide a reasonably good estimate (Kumar 2011:197).

As mentioned earlier, this study opted to use the Masters and postgraduate diploma students only. The possibility of including doctorate students was considered but ideally they were very few if at all and were assumed to be carrying out their research away from the locations or at the time of carrying out the research. The only one who was available was defined as part of the postgraduate distance learning population which then formed part of the sample size of the population. In terms of librarians, the study selected the deputy university librarians who were deemed to engage with distance learners. Since in both libraries, TUM and UoN and indeed in most universities in Kenya, there were no specific librarians designated to handle or dedicated to DLs, only those who deal with their queries or literature searches were involved for this study. The study adopted a commonly used term for them - subject librarians although this was not explicitly explained in any policy paper or job descriptions in Kenya. The term 'subject librarians' is commonly used in the South African context for academic librarians who support the information needs of academic staff and students (Hoskins 2002; Kaniki 1996). These observations and guidelines informed the sample size of the population.

4.7 Sampling frame

According to Simba (2014:101); another list from the general population is vital for survey research projects once the general population has been defined because it is from this list that a sample can be drawn. Such members must clearly be identified and should be able to be contacted. The researcher must assure that all sectors of the population are represented in the data pool of the working list. This list is sometimes referred to as the sampling frame.

An earlier but clear definition of a sampling frame is offered by Sproull (1995:110) where it was stated that it is a list or other representation of the elements in a population from which a sample is selected. A more recent definition by O’Leary (2010:163) simply states that a “sample frame is a list that includes every member from which a sample is to be taken and is essential to all sampling processes”. Ideally therefore a sample frame should match the target population but this is rarely the case. There is no guarantee that a researcher can have access to every element of the population (O’Leary, 2010) and indeed most times a researcher cannot obtain the full list. A strategic decision therefore must be made to ensure a sampling frame is as accurate as possible of a reflection of the target population.

For the purposes of this study, the sampling frames that were consulted and provided reliable information were the lists of registered postgraduate students at TUM which was supplied through the office of the Academic Registrar(AR). This list supplied information on which student was registered for which course; whether full-time or part-time, evening and or both. For the UoN, the list was supplied by the Course Coordinator at the Open and Distance Learning Centre at the Kikuyu Campus. A strategic decision was made to include only those students who were doing Masters or postgraduate courses at the Kikuyu Campus Centre, Anniversary Towers Centre (CBD) and the Ngara Girls High School Centre as mentioned earlier.

The study adopted a census survey which covered every single person of the population. According to O’Leary (2010:181); a census is a survey that does not rely on a sample but rather covers every single person in a defined area. A smaller scale census for instance might be all the students in a particular school or university. Table 4.1 shows the target size of the population of the typical distance learners and librarians in the study, and Table 4.2 shows the response rate of

the same. Of 165 students, 141 responded to the questionnaire. This yielded a good response of 85.4% of the population of the students. Ten librarians were interviewed, yielding a response rate of 100% for the librarians. Semi-structured interviews were conducted with relevant librarians, who in this case were subject librarians in the absence of designated distance learning librarians; who otherwise would have been ideal for the purposes of this kind of an interview. A self-administered questionnaire was given to the distant learning students. The target study population and response rates are shown in Table 4.1 and Table 4.2 here below.

Table 4 1: Target study population

Name of university	Masters and PGD students	Librarians
University of Nairobi	85	6
Technical University of Mombasa	80	5
Total	165	11

Source: Field data (2014)

Table 4.2: Response rate

Name of university	Masters and PGD students	Percentage	Librarians	Percentage
University of Nairobi	72	43.6%	6	54.5%
Technical University of Mombasa	69	41.8%	5	45.5%
Total	141	85.4%	11	100%

Source: Field data (2014)

4.8 Data collection and instruments

This section describes the instruments that were used to collect data, the type of questions that were asked of respondents, and pre-testing. Since the researcher used a mixed method approach for this study, the triangulation approach was found most effective. This is because the study included a mixture of both quantitative and qualitative research strategies and a variety of methods such as a questionnaire, semi-structured interview schedule and documentary analysis.

O’Leary (2010:115) has offered techniques that can be used to ensure thoroughness and rigour; and defined triangulation as or using more than one source of data to confirm the reliability of the source. Connaway (2010:146) citing Gorman and Clayton (2005); states that “the mixed methods approaches allow the research to use a range of methods, data, data investigators and theories within a study”. For example, information about library use could be collected within questionnaire, interview, documentary analysis and observation. Furthermore consistent findings amongst data collection methods or techniques would suggest the findings to be reasonably valid. It has also been stated that the mixed research approach can also reduce the gap between qualitative and quantitative paradigms in order to answer questions holistically (Majinge 2014:108). As a result of all these suggestions, the current study adopted the questionnaire, semi-structured interview, and documentary analysis as data gathering tools. The sources of data to be collected for the research questions are reflected on Table 4.3 as indicated here below:

Table 4.3: Mapping research questions with sources of data

Research question	Sources of data
What are the information needs of distance learners in Kenya?	Questionnaire and interview
Are the services offered sufficient for the information needs of distance learners?	Questionnaire and interview
What support do you receive from the library on user education?	Questionnaire and document review
What challenges do distance learners face in accessing library services?	Questionnaire and interview
What strategies can be used to overcome these challenges?	Questionnaire and document review

Source: Researcher (2014)

4.8.1. Questionnaire

One of the most popular tools for data collection in research is through questionnaires. A questionnaire is a list of questions made to be answered by the respondents (Kumar 2011:145). There are various reasons for using questionnaires. Data can be harvested from a larger sample than would be possible from another technique, and a larger and geographically dispersed community can be reached at a lower cost. A questionnaire also not only offers anonymity and

confidentiality, but data analysis can be determined from the outset even as far as coding before the questionnaires have been distributed (Pickard 2007:183).

In a questionnaire, respondents read the question, interpret what is required and then respond. The type of questionnaires that were developed contained both closed and open-ended questions. Closed questions are also known as fixed response or structured questions. Usually they limit the responses of the participant with possible responses ranging from a simple 'yes' or 'no' to a checklist of possible replies or a scale indicating various degrees of a particular response (Connaway and Powell, 2010:150). On the other hand, open-ended or unstructured questions are designed to permit free responses from participants rather than limited ones to specific alternatives (Connaway and Powell, 2010). It has been observed that these, questions are useful for the explanatory type of studies by providing unlimited responses to categories provided by the researcher, thus ensuring that the information required by the researcher is obtained.

The distance learners' questionnaire (Appendix 4) used for this study was divided into six main sections in order to obtain different categories of information deemed necessary for this type of study, and were as follows:

1. Background information - This section was expected to collect demographic data such as gender, age, level of education, among others.
2. Information needs -In this section, it was intended to solicit information on the reasons the student require and/or seek information for their studies.
3. Mode of delivery (modules) - In this section, respondents were required to explain how they receive their lectures and/or lessons as distance learners.
4. Information seeking - This section was intended to provide the type of information distance learners prefer, the sources they consult and how they obtained information for their studies.
5. Library information services - This section was intended to solicit information on whether the information needs of distance learners were being met satisfactorily and the challenges they face.
6. Use of Information Communication Technology (ICT) - This section was intended to offer insight into students' ICT skills and their use of e-resources.

7. Barriers and hindrances - This section was expected to provide information on any obstacles or barriers to students' information needs.

The respondents were given adequate time and a chance to add any additional comments on their information needs, their challenges, search strategies that they use for soliciting information and any barriers that they faced. Since they were selected due to their level of education (postgraduates), they were regarded as adequately literate and well informed to be able to answer the questions reliably.

4.8.2 Semi-structured interviews

In research terms, an interview is a two way rigorous or exhaustive conversation between the investigator and the interviewee for the purposes of obtaining information relevant to the study. According to Kumar (2011:389); interviewing is one of the methods of data collection used in the social sciences. Interviewing requires a face-to-face conversation or contact via the telephone and requires some interviewing skills. According to O'Leary (2010:194); interviewing is a method of data collection that involves researchers seeking open-ended answers related to a number of questions, topic areas or themes. There are various options that can be used in research, and an interview can be formal or informal, structured or semi-structured. It all depends on the research agenda (O'Leary, 2010).

A semi-structured interview is considered to be one of the best options in a situation where the researcher is not likely to get more than one chance to interview the respondent (Simba, 2014). The method of data collection in this approach is usually based on the use of the interview guide. The semi-structured interview can start with a defined questioning plan but can shift in order to follow a natural flow of conversation. Interviewers can also deviate from the plan to pursue other interesting issues, even if unrelated to the topic (O'Leary, 2010).

The advantage of this approach is that while a researcher is able to obtain data that was intended; unexpected, interesting and useful data can also emerge. This study adapted a face-to-face semi-structured interview approach in order to gain insight into the participants' perceptions. Two semi-structured schedules were used for this study. One was for deputy university librarians

(Appendix 2) and another for the subject librarians (Appendix 3) making a total of ten interviews in all. The semi structured schedule for deputy university librarians was divided into six sections in order to acquire different categories of information from the deputy university librarians who are the managers of these academic libraries. The initial sections required information of a demographic nature followed by pre-planning, budgets, policies and guidelines and support for distance learners information needs. The other sections required information regarding training and future plans, possible collaborations, challenges and possible solutions. The schedule for subject librarians guided them to initially provide demographic data followed by their involvement in the pre-planning of distance learning programmes, services to distance learners' needs and possible evaluation of those needs and support. This is then followed by sections on other libraries and resources, staff, ICT user skills, possible collaboration with related information suppliers, challenges and possible solutions.

4.8.3 Documentary analysis

Another method often used by researchers is that of collecting the necessary information by searching and collecting various documents related to the study. Robson (2002:348) describes documents as “written documents, whether this be a book, newspaper or magazine, notices, letters or whatever, although sometimes the term is extended to include non-written documents such as films and television photographs”. O’Leary (2010:223) has defined documentary analysis as “a collection of various forms of written text as a primary source of research data”. Other sources of information such as the internet and websites that have been used for this study can also be considered as documents (Fahad 2010:118).

The various documents used for this study were those that were related to topics associated with the research. These documents were obtained manually or from formal websites of the universities, academic libraries, Commission for University Education (CUE), Government of Kenya (GoK), Office of the Presidency (OP) and Ministry of Education and Planning, among others. They were primarily included in the literature review and were accessed physically or through the relevant websites. Other important documents included conference papers, reports, plans and policies which provided a rich insight and background into the current situation of distance learning and the provision of library services to distance learners.

4.8.4 Peer review and pre-testing

It has been stated that any research instrument whether a questionnaire or interview schedule should be tested before it is used for actual data collection. In a recent study, Simba (2014:109); citing various sources such as Bertram (2004:83) and Williams(2003); posited that an accurate questionnaire is important for respondents and it therefore should be clear and unambiguous and that peer review and pre-testing of instruments before administering them to the sample population is a prerequisite (Barbie and Mouton,2001).Moreover pre-testing a questionnaire not only refines it in order for respondents not to have problems in answering the question, but also it is important to pre-test it on people who are similar to or familiar with the study or questionnaire (Babbie and Mouton, 2001:244).

Kumar (2011:158) has also stated that pre-testing entails a critical examination of the understanding of a question and its meaning for a respondent. The purpose being to identify problems that potential respondents might encounter in their understanding or interpretation of a question. In this context both the questionnaire and the interview schedules were reviewed by the supervisor and other academics in the Information Studies Programme of the University of KwaZulu-Natal (UKZN) and the Research and Higher Degrees Committee which approved them. Subsequently the questionnaire was pre-tested on Information Studies Honours part-time students of UKZN and the interview guide was pre-tested on non-subject librarians at TUM who provided very useful suggestions to improve the instrument. In consultation with the research supervisor, these suggestions and corrections were included in the final instruments that were used for this study.

4.9 Validity and reliability

Validity and reliability is important and is applied to every aspect of the research process (Kumar 2011:402). It refers to the appropriateness of finding out what a researcher set out to find or measure. In research, it is important to establish the suitability, accuracy and quality of measures taken to answer research questions. It is also important that the ability of a research instrument is able to provide similar results when used repeatedly under similar conditions. In other words, despite the accuracy, stability and predictability of research instruments they must also show some degree of consistency (Teddlie, 2009:211). While validity is concerned with the truth value

or whether the conclusions are correct, reliability is concerned with consistency and whether data or results obtained are the same under repeated trials (O’Leary 2010:43).

A researcher can adapt from well-known experts who may have used similar instruments. In this regard, similar instruments were used in studies done by Unwin, Stephen and Bolton (1998) in UK; Oladukun, 2002b in Botswana; Kavulya, 2004 in Kenya; Lwehabura, 2007 in Tanzania; Nwezeh, 2010 in Nigeria; Fahad, 2010; in Saudi Arabia; and Mnubi-Mchombu, 2013 in Namibia. This study adapted the instruments from two established experts in the fields of information needs and distance education, namely Kavulya (2004) in Kenya and Oladukun (2002b) in Botswana.

4.9.1 Permission to conduct research

This section describes the process of seeking and obtaining approval to conduct the research at Technical University of Mombasa and University of Nairobi and also from the government of Kenya through the National Commission for Science, Technology and Innovation (NACOSTI), which has the mandate to approve or deny the carrying out of any research process in the country. The administration of the instruments (both the questionnaire and the semi-structured interview) and the method used for data analysis will also be discussed here.

The process of conducting any type of research in Kenya requires the researcher to obtain permission from the relevant authorities for that purpose. In this regard before the process of data collection, permission to conduct the study was sought from the government of Kenya through NACOSTI and their authorized agent, Pwani University (PU) who granted permission for the research to be conducted in Kenya (Appendix 9) and in particular the areas study which were TUM and UoN. An introductory letter was sent by the research supervisor at UKZN explaining briefly the purpose of the study and confirming that the researcher was indeed a bonafide registered student of UKZN. After permission was granted by the Government of Kenya and both universities, all these documents including the ethical clearance granted by Research Ethics Committee at UKZN and consent forms (Appendix 10) were provided to the relevant Heads of Departments or Centre Directors and Course Coordinators to demonstrate and confirm that the researcher had complied with all the required conditions.

4.9.2 Administration of the questionnaire and interview schedule

It should be noted that Nairobi and Mombasa are approximately 700 miles apart. Due to this separation in distance of the study areas; two Research Assistants were recruited to assist the researcher, initially with the distribution and collection of the questionnaires. One Research Assistance was a first year Masters student at TUM and another one was a member of the library staff who was on (annual) leave. The Research Assistants were briefed on the research project, their specific roles and some of the significant issues required for compliance, such as ethics, rights and consent of the respondents. The Assistants were also advised not only to be courteous but also to assist respondents whenever clarification was required. Finally, they were also advised to give sufficient time to the respondents, to encourage them, to complete the questionnaires in one sitting to improve the response rate; and to consult the researcher whenever in doubt on any issues that were raised during data collection. The Course Coordinators and Central Directors assisted with security clearance, access to the premises and availability of the respondents.

The researcher travelled to Kenya in May 2014 and the data collection at TUM was carried out in the months of June and July 2014 after pre-testing of the instruments. Data collection at UoN was carried out in the months of August and September 2014. However due to the inadequacy of data obtained and with the advice of the Research Supervisor who was in regular contact with the Researcher, the exercise was repeated again in the months of January and February 2015 in order to improve the response rate. The questionnaires were distributed to the respondents in their classrooms or lecture theatres after brief introductions by the Course Coordinators or Centre Directors who generally were very co-operative.

However, a number of problems were encountered during the data collection process. The long distance between the two study areas created intricate logistical challenges. After travelling these long distances it was not unusual sometimes to find that scheduled interviews would not take place because the interviewees were away on official business or indeed respondents did not show up at all and the interview had to be re-scheduled. This development created unnecessary labour in collecting interview data. Time management and time lines were also an issue and occasionally it was not uncommon for the Research Assistants to report that since the research

was voluntary, some respondent's did not wish to participate. In view of this, the research team was advised to ensure that all questionnaires were filled and returned accordingly on the same day or during the supervised session. Although the total number of questionnaires intended for the selected sample was 165, in reality few distance learning students arrived in the class or lecture hall at the same time for a number of reasons. Some students claimed they travelled from very far which was understandable and others claimed that they were delayed by traffic jams, among other reasons. Furthermore, there were further teething issues even on the supervised administration of the questionnaires. There were delays in reporting on time in groups or answering the questionnaires on time and some respondents promised that they would scan and send them through e-mails or post office. Of the 165 questionnaires distributed, a total of 141 were returned, yielding a response rate of 85.4% (Table 4.2).

In terms of administering the scheduled interviews at the UoN, the researcher with the assistance of the Course Coordinator made an appointment with the College Librarian who in turn organized for the subject librarians to meet the researcher altogether and the interviews were successfully carried out on the same day. At TUM, as the researcher was also a member of staff here was good co-operation but due to the busy schedules of most of the concerned members; the interviews were carried out individually on separate days and at some point they had to be shifted to a nearby hotel. As well as following the guiding interview schedules, the researcher also recorded the interviews with the permission of the interviewees. The interviews yielded a response rate of 100%.

4.10 Data analysis and presentation

According to Simba (2014:119); data analysis in research is a process of making meaning from the data collected. This process is essential because it reveals the findings of the study. This study used both quantitative and qualitative techniques. In view of this, both quantitative and qualitative data analysis methods were used to enrich the research findings and interpretation. Kumar (2011:2527) has stated that to be able to make sense of the information required, a number of procedures need to be followed. These procedures are the same whether the study is qualitative or quantitative, although a different approach may be needed for each. In quantitative research, the main emphasis in data analysis is analyzing information obtained from respondents.

In qualitative research, the focus is on the obtained information and its value- be it the contents, discourse or narrative. For quantitative and hence statistical analysis, SPSS was used. This is the most popular statistical package because it is comprehensive, versatile and relatively easy to use for statistical analysis. It is also used for report writing, tabulation and general purpose data management (Connaway and Powell 2010:284). For qualitative data analysis, there are a variety of techniques that can be used by researchers. However, qualitative data are more challenging to analyze as the data is not numerical but rather text or words. This means that they have to be coded in a format that can be recognized by a computer (Joyner, William and Glatthorn 2013:82).

Recently data analysis software packages such as NVivo and ATLAS.ti have emerged (Simba 2014:119) and have made analyzing qualitative data much simpler. Another type of a method that can be used in analyzing qualitative data is thematic content analysis. This is a method for gathering and analyzing the content and transforming the data into useable information. Thematic analysis does not require detailed theoretical approaches, and is frequently used for in-depth interviews (Curtis and Curtis, 2011:44).The current study adapted thematic content analysis to analyze the qualitative data obtained through the semi-structured interviews.

4.10.1. Ethical considerations

All professions are guided by certain codes of ethics, social sciences and more specifically, Information Studies is no exception. O’Leary (2010:41) has stated that ethics are based on moral obligations and refer to the principle or rules of behaviour that act to dictate what is acceptable or allowed within a profession. Connaway and Powell (2010:91) has also stated that there are a few books and articles dealing specifically with ethical issues in LIS. Westbrook (1993) on the analysis of community information needs, offering guidelines for ethical practices and stressing that anonymity and confidentiality of everyone involved must be maintained and that no harm should be done to anyone in the process. Some of the ethical issues were partly discussed in Chapter One, section 1.8. Suffice to mention that for this study the following considerations were observed, among others:

- The confidentiality and anonymity of respondents was strictly observed.
- All questionnaires had included explanations, processes and purposes of the research.

- The informed consent of respondents (Appendix 1) was obtained in advance.
- The researcher ensured that no emotional, psychological or undue stress or physical harm would happen to respondents.
- Respondents were informed that participation was voluntary and all reference to information sources were cited appropriately.

4.10.2 Evaluation of the methods used

In research, evaluation of the method used is done to confirm efficiency and replication for further research. Joyner, William and Glatthorn (2013:236) states that regardless of the type of study that is being conducted, a researcher is required to explain the procedures in detail for other researchers to replicate the studies and also to enable potential consumers and stakeholders of the research to determine if the findings can be trusted.

The procedure that was followed in the evaluation of methods for this study was to begin with the sampling method, the procedures that were used and finally the instrumentation. This study used the mixed method research approach, this means that a combination of both qualitative and quantitative methods were used. After the target population was identified, sampling frames were obtained through the office of the Registrar for TUM and through the Coordinator of the Distance Learning Programmes at the Kikuyu Campus, UoN. As mentioned earlier, only Masters and Postgraduate Diploma students were surveyed in terms of the distance learning questionnaire. For the semi-structured interviews; only the deputy university librarians and subject librarians were surveyed. The deputy university librarians were an important sample due to their capacities as administrators and managers of the libraries. The subject librarians were the closest to distance learning librarians who otherwise would have been the ideal sample for this type of study but who currently were [are] not part of staff in these libraries.

The process of determining the validity and reliability of the research was dependent upon the design of the study. As noted earlier, this study used a questionnaire, semi-structured interviews and documentary analysis. The instruments were rigorously evaluated, both internally and externally. Peer reviewing and pre-testing was completed and the administration of the instruments followed the set out procedures, including ethical considerations. Furthermore, the

evaluation of the instruments allows for authenticity, quality and appropriateness because as stated by Simba (2014:122) inadequacy or inappropriateness can affect the results obtained. Given that all documents were obtained from official sources and the instruments went through a very rigorous reliability, validity and peer-reviewing process both internally and externally; the authenticity, credibility and originality was assured because as Payne and Payne (2004:65) states failure to meet such will result in the research lacking merit.

4.11 Summary of the chapter

This chapter presented the key areas of the research methodology and the research design adopted for the study. The suitability of the research approach was discussed, the population sampling techniques, data collection tools, administration of the questionnaire and the semi-structured interviews were also discussed. Data analysis and evaluation of the methods were also described, and the methods adopted were found appropriate for the research problem under investigation.

CHAPTER FIVE

PRESENTATION OF THE FINDINGS

5.1 Introduction

This chapter presents the results of the study. The main objective of the study was to investigate the support that academic libraries provide to distance learners. Two public universities (University of Nairobi and Technical University of Mombasa) were selected due to the reasons outlined in Chapter One, section 1.7. While data collection was done in line with the objective of the study, its primary aim was to establish the basis for initiating strategies and possible solutions, guidelines and standards to improve distance education, not only in Kenya but also in other parts of Africa. This was systematically conducted in order to answer the following key questions which were developed for this purpose:

- 1) What were the information needs of distance learners at the universities?
- 2) What library services were offered to distance learners at the universities?
- 3) What support did distance learners receive in terms of user-education or orientation?
- 4) What challenges did distance learners face in accessing library services and resources?
- 5) What strategies could be adopted to overcome the challenges?

The above five questions, which were consistent with Wilson's Model of information-seeking behaviour and the Manitoba Resource-based Model, formed the basis for data collection for this study. Furthermore, it is from these five questions that the data collection techniques were derived. Data was generated based on the data-gathering tools derived from the questionnaires and semi-structured interviews. The questionnaires included personal information such as gender, age, place of residence and the institutions attended among others. The questionnaires also included the more relevant research questions such as information needs; information seeking behaviours of distance learners; services available; ICT infrastructure; students' IT skills; barriers and hindrances in acquiring information for their programmes; suggestions and possible solutions to improving the availability of information.

The questionnaires were distributed to distance learning students of the two universities. This process was supported by the semi-structured interviews conducted with staff working in the

university libraries. The staff who were involved included the deputy university librarians who are involved in the day-to-day administrative, management and policy formulation of the universities. In addition to this, they attend high level decision making meetings on how the university affairs should be conducted. Due to the fact that there were no specific librarians dedicated to distance learning (which would have been ideal for this study) subject librarians and/or reference librarians who assist distance learners were interviewed instead. Data collected from the questionnaires was coded, cleaned, edited and analyzed using descriptive statistics with the aid of SPSS Version 18 statistical software package. In addition, data collected using structured interviews was analyzed using thematic content analysis. Data from the questionnaires is presented first followed by data from the structured interviews.

5.2 Questionnaire result

This section presents data from the questionnaires which were distributed to distance learning students at the University of Nairobi and the Technical University of Mombasa.

5.2.1 Response rates for the questionnaire

Based on information obtained from the universities, Chapter Four (Table 4.1), section 4.7, demonstrates a total of 165 questionnaires were distributed to distance learning students at both the University of Nairobi and the Technical University of Mombasa. A total of 141 questionnaires were returned. This indicates a response rate of 85% which is a good response rate as recommended by Babbie and Mouton (2001:261) and Joyner, William and Glatthorn (2013:168), who have stated that a response rate of above 60% or 70% is sufficient, but that a nonresponsive rate as low as 20% could raise questions about the generalizability of the results.

5.2.2 Background information

While background data is arguably not that important, it does provide a good perspective and setting. This section presents the demographic data from the respondents.

5.2.3 Demographic data from surveyed students

Ideally it can be argued that a researcher should be concerned with responses that deal with the research questions only. However, while this should be the acceptable norm and given that the

characteristics of respondents was not really part of the objectives of the study, it is presented nonetheless so as to provide some background information about the respondents involved in the study. The demographic data was elicited from the questionnaires that were distributed to the distance learning students. It includes gender, age, and name of institution, programme of study, year of study and where they live, amongst other information.

5.2.4 Gender of respondents

Question 1 was asked to establish the gender of the distance learners. Of the 141 respondents, 85 (60.3%) were male and 56 (39.7%) were female. Therefore, more male students participated in the distance learning programmes than female students.

5.2.5 Age of respondents

Question 2 was asked to establish the age range of the distance learners. This section presents the age categories of the respondents from the two public universities. The age groups were grouped into eight categories, ranging from the youngest group which was 21 to 25 years and the oldest age group which was 56 years and above. The details of the age range are shown in Figure 5.1 below.

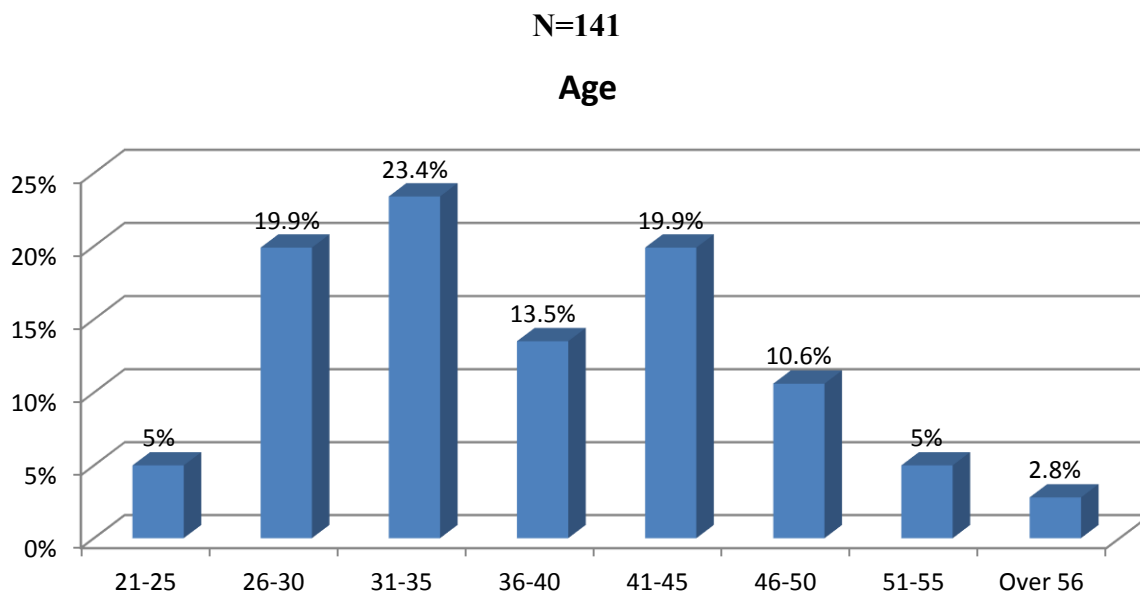


Figure 5.1: Age of respondents
Source: Field data (2014)

Figure 5.1 shows that 33 (23.4%) of the respondents were in the 31 to 35 age group while those in the 26 to 30 and 41 to 45 age groups accounted for 28 (19.9%) respectively. There were 19 (13.5%) respondents in the 36 to 40 age group and 15 (10.6%) in the 46 to 50 age group. Respondents in the lower age brackets (21 to 25) and those in the older age bracket (51 to 55) accounted for only seven (5%), while only 2.8 % of the respondent were above 56 years.

5.2.6 University attended

Question 3 was asked to determine which university the distance learners attended. The University of Nairobi was attended by 74 (52.5%) of the respondents, while 67 (47.5%) of the respondents attended the Technical University of Mombasa.

5.2.7 Level of study

Question 4 was asked to determine the level of study of the distance learners. The level of study of the distance learners is shown in Figure 5.2.

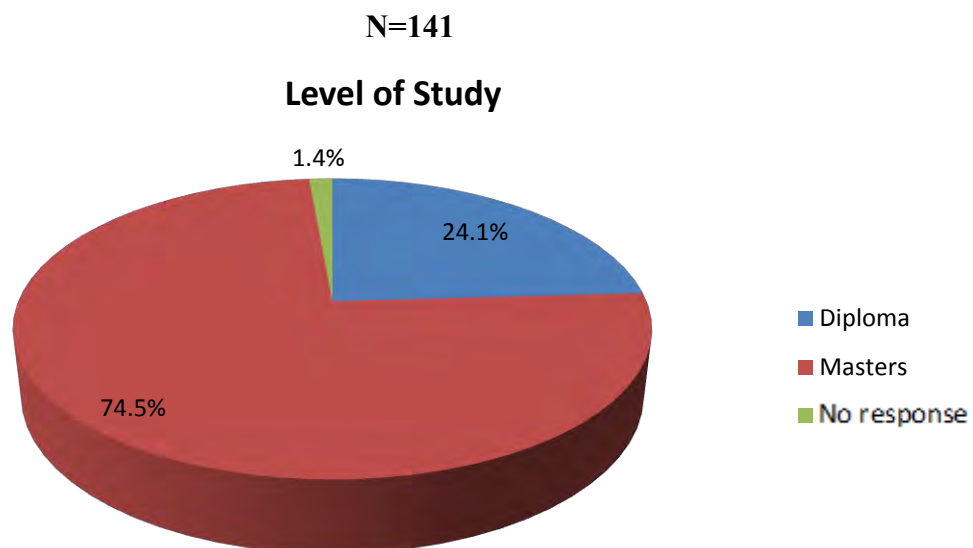


Figure 5.2: Level of study
Source: Field data (2014)

Figure 5.2 shows that 105 (74.5%) Masters students accounted for the highest number of respondents followed by the 34 Diploma (24.1%) students, while two students (1.4%) did not respond to the question.

5.2.8 Year of study at university

Question 5 was asked to establish the respondent year of study. The respondents' year of study at the University is reflected in Figure 5.3.

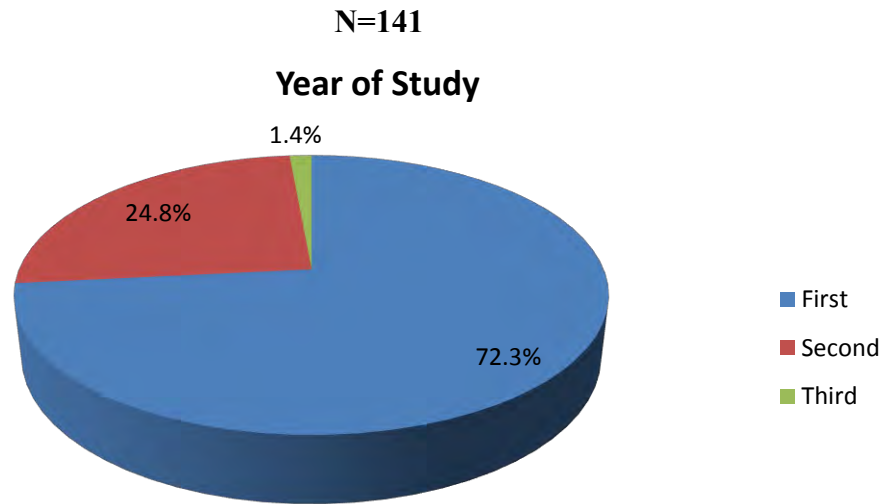


Figure 5.3: Year of study
Source: Field Data (2014)

Figure 5.3 shows that the majority of respondents 102 (72.3%) were in their first year at the universities, followed by 35 (24.8%) in their second year. There were only two (1.4%) respondents in their third year at the Universities.

5.2.9 Place of residence

In Question 6 the study wanted to establish the places of residence of respondents. This was in order to obtain information on the distance from places of residence to their places of study in order to find out what the challenges students face in travelling to their studying places and access to information. Figure 5.4 shows the respondents' places of residence.

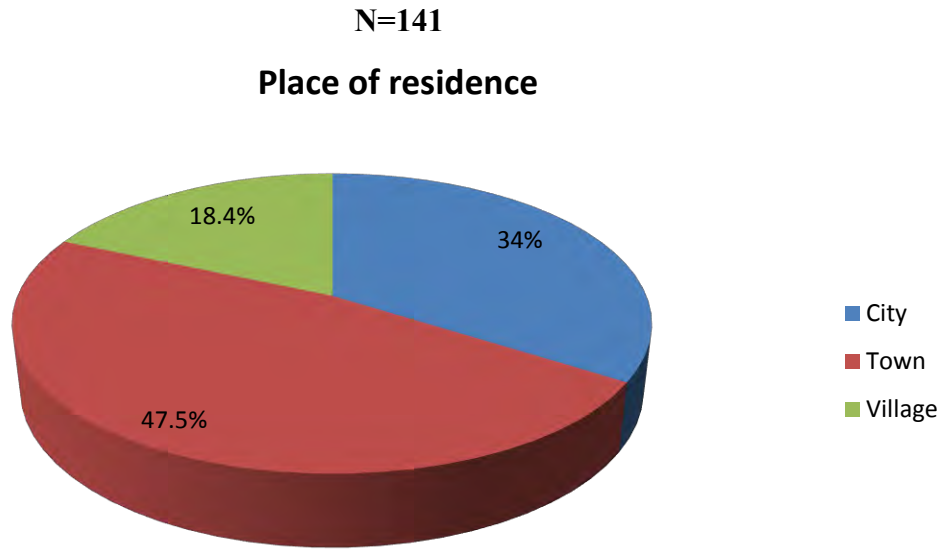


Figure 5.4: Place of residence
Source: Field data (2014)

Figure 5.4 shows that less than half of the majority, 67 (47.5%); of the respondents lived in town, followed by 48 (34%) who lived in the city. Twenty six (18.4%) of the respondents lived in villages.

5.3 Information needs

This section describes the information needs of the respondents. The participants were asked in Question 7 why they required and sought information for their academic needs.

Table 5.1: Information needs N=141

Information needs	Frequency	Percentage
Exams	123	87.2
Assignments	81	57.4
Tests	72	51.1
Lectures	43	30.5
Personal	12	8.5

Source: Field data (2014)
NB: Data based on multiple responses

Table 5.1 reveals that a majority, 123 (87.2%); of respondents required information in order to write examinations followed by 81 (57.4%) who required information to write assignments.

More than half, 72 (51.1%), required information for tests and 43 (30.5%) required information for their lectures. Twelve (8.5%) of the students listed personal information needs.

5.3.1 Mode of delivery of modules and lessons

The study sought to establish how distance learners received their lectures or lessons.

5.3.2 Receiving of lectures or lessons as a distance learner

Question 8 was asked to establish the mode of delivery. Table 5.2 presents the mode of delivery of lectures and lessons which respondents received.

Table 5.2: Mode of delivery
N=141

Mode of delivery	Frequency	Percentage
Contact sessions at main campus	94	66.7
Study guide	61	43.3
Contact at distance campus	57	40.4
Online/WebCT	32	22.7

Source: Field Data (2014)

NB: Data based on multiple responses

Table 5.2 shows that more than half, 94 (66.7%) of the respondents attended contact sessions at the main campus. Study guides were the mode of delivery for 61 (43.3%) of the respondents and contact sessions at a distance campus was the mode of delivery for 57 (40.4%). In terms of online/WebCT only 32 (22.7%) received such delivery. It must be noted that some respondents produced multiple responses as they would have been expected to have one mode of delivery for each module/course attempted.

5.3.3 Satisfaction with packages received

Question 9 was asked to establish whether the study guides or online packages which students received were adequate to meet their needs. A majority, 95(67.4%), of the respondents were of the opinion that the modules/study guides or online packages received from their institution were not sufficient to meet their information needs. Only 46 (32.6%) of the respondents considered the modules and study guides sufficient to adequately meet their information needs.

5.3.4 Other sources used

The respondents were asked to indicate other sources which they used to meet their information needs in Question 10. These alternative sources included the internet, radio, telephone, lecturers, e-mail, course coordinators, colleagues, and library resources. Table 5.3 shows the other sources used by the respondents to meet their information needs. Amongst other sources used, the internet was used by the majority, 125 (88.7%); followed by lecturers which were consulted, 85 (60.3%); library resources by 76 (53.9%); colleagues consulted by 54 (38.3%); and e-mail used by 52 (36.9%) of the respondents. Amongst the least used alternative information sources were the course coordinators 29 (20.6%) with radio and telephone both used by 13 (9.2%) respectively.

Table 5.3: Other sources used
N=141

Other sources used	Frequency	Percentage
Internet	125	88.7
Lecturers	85	60.3
Library resources	76	53.9
Colleagues	54	38.3
E-mail	52	36.9
Course Coordinator	29	20.6
Radio	13	9.2
Telephone	13	9.2

Source: Field data (2014)

NB: Data based on multiple responses

5.4 Information seeking approach

The study sought to establish the information-seeking approach adopted by distance learners. This included their preferred format, sources used, most important sources consulted and how the respondents obtain information needed to prepare for examinations, tests and assignments.

5.4.1 Preferred information format

Question 11 asked respondents what their preferred format to receive information was. A majority of 85 (61%) of respondents preferred information in electronic format with 42(30%) preferring print. The result shows that information in audio-visual format was preferred by 12 (9%) respondents.

5.4.2 Information resources used in the last year

Question 12 was asked to establish which sources were used during the previous year by the respondents. The results are shown in Table 5.4 which shows that in the previous year books remained the major information source used by 122 (86.5%) of the respondents. This was followed by the internet used by 114 (80.9%) lecturers consulted by 97 (68.8%); study guides used by 86 (61%); newspapers by 66 (46.8%); and e-mail used by 62 (44%) of the respondents. Other information sources used were references by 56 (39.7%), tutors by 52 (36.9%), television by 34 (24.1%) and radio by 30 (21.3%). Online databases were only used by 21 (14.9%) and interlibrary loans by six (4.3%) of the respondents.

Table 5.4: Information resources used in the last year
N=141

Information resources	Frequency	Percentage
Books	122	86.5
Internet	114	80.9
Lecturers	97	68.8
Study guide	86	61.0
Journals	85	60.3
Newspaper	66	46.8
E-mail	62	44.0
References	56	39.7
Tutors	52	36.9
Television	34	24.1
Radio	30	21.3
Government publications	30	21.3
Online catalogue	24	17.0
Subject/reference librarians	22	15.6
Telephone	21	14.9
Online databases	21	14.9
Interlibrary loans	6	4.3
Microfiche/Microfilm	2	1.4

Source: Field data (2014)

NB: Data based on multiple responses

5.4.3 Important information sources

Question 13 asked the respondents to indicate what their most important information sources were. The information sources and their order of importance is shown in Table 5.5. The result in the table shows that module/study guides were the most important information source for 77 (54.6%) of the respondents, followed by the internet for 65 (46.1%) of the respondents, lecturers for 60 (42.1%) of respondents and the library for 44 (31.2%) of respondents. Books (40 or 28.4%), friends and colleagues (35 or 24.8%), tutors (22 or 15.6%) were an important source for respondents and WebCT for 16 (11.3%) of the respondents.

Table 5.5: Important information sources
N=141

Information sources	Frequency	Percentage
Module/Study guide	77	54.6
Internet	65	46.1
Lecturers	60	42.6
Library	44	31.2
Books	40	28.4
Friends and colleagues	35	24.8
Tutors	22	15.6
WebCT	16	11.3

Source: Field data (2014)

NB: Data based on multiple responses

5.4.4 Information seeking for assignments, tests or examinations

Question 14 asked respondents to indicate how they seek information needed to prepare for assignments, tests or examinations. The results are shown in Table 5.6.

Table 5.6: Information seeking for assignments, tests or examinations
N=141

How information is sought	Frequency	Percentage
Travel to university library	101	71.6
Buy own materials	66	46.8
Online or electronic	63	44.7
Ask help from knowledgeable people	36	25.5
Collaborating library/information center	27	19.1
Direct supply by post from university library	26	18.4

Source: Field data (2014)

NB: Data based on multiple responses

Table 5.6 shows that a majority of the respondents 101 (71.6%) paid a personal visit to the university library to seek information for assignments, tests, and examination; while less than half, 66(46.8%) of the respondents bought their own materials. Those who used online or electronic sources accounted for 63 (44.7%) and 36 (25.5%) asked help from knowledgeable people. Learners that sought information through collaboration with other library and information centers and those that obtained their information through direct supply through the post from the university library account for 27% (19.1%) and 26 (18.4%) of the respondents respectively.

5.5 Library information services and learners' information needs

The study wanted to establish whether the library and information services meet the learners' information needs.

5.5.1 Library use

Question 15 was asked to establish if the respondents used the library to meet their information needs. The result showed that the majority of 119 (84.4%) of the learners used the library to meet their information needs, while only 22 (15.6%) of the learners did not use a library.

5.5.2 Adequate library and information service

Question 16 asked the respondents if their institutions provided them with adequate library and information services. The result showed that just more than half of the respondents, 75 (53.2%),

considered the library, and information services provided by their institution as being inadequate, while less than half, 63 (44.7%), found the library and information services inadequate.

5.5.3 How library and information support was received

Question 17 asked the respondents to indicate how they received library and information support. The categories were similar to question 14 (section 5.4.4) where they were asked to indicate how they seek information to prepare for assignments, tests or examinations. Table 5.7 showed that less than half, 64 (45.4%) of the respondents, received library support by travelling to the university library. Twenty-eight (19.9%) received library support through online or electronic supply, while 23 (16.3%) bought their own materials while a further 16 (11.3%) asked knowledgeable people to assist them with their information needs. Eleven (7.8%) of the respondents opted to use the information services of other collaborating libraries and information centers.

Table 5.7: Information support services
N=141

Information support services	Frequency	Percentage
Personal travel to university library	64	45.4
Through online or electronic supply	28	19.9
Buy own materials	23	16.3
Direct supply from university library	16	11.3
I ask for help from knowledgeable people	16	11.3
Collaborating library and information centers	11	7.8

Source: Field data (2014)

NB: Data based on multiple responses

5.5.4 Institutional libraries used

In Question 18, the respondents were asked which institutional libraries they used to access library and information services. The results showed that more than half 76 (53.9%) used the main campus library and a public branch library respectively, while 11.3% used a satellite campus library.

5.5.5 Membership arrangements

In Question 19, the respondents were asked who arranged the use of the library for them. The results are shown in Table 5.8 which indicates that more than half (54 or 38.3%) of the respondents stated that their institution arranged the use of the library for them, while 51 (34.2%) affirmed that they did so themselves. Only 30 (20.1%) stated that their membership was automatic, while six (4.2%) did not respond to the question.

Table 5.8: Membership of library
N=141

Membership	Frequency	Percentage
My institution	54	38.3
Myself	51	36.2
Automatic	30	21.3
Non response	6	4.2

Source: Field data (2014)

5.5.6 Payment of membership and services

In Question 20, the respondents were asked whether they paid for their membership or services obtained from the library. The result shows that a majority of 85 (60.3%) of the respondents stated that they paid for membership or library services, while 54 (38.3%) stated they did not pay.

5.5.7 Access to the library website

In Question 21, the respondents were asked if they had access to their university library website. The results shows that a majority of 105 (74.5%) stated that they had access to their university website, while 35 (24.8%) stated they did not have access. One participant (0.7%) did not respond to the question.

5.5.8 Frequency of use of library website

Question 22 asked the 105 (74.5%) respondents who had accessed to the website how often they accessed the website. The results are shown in Table 5.9. The table shows that a majority, 74 (105%) of the respondents used the website regularly compared to seven (6.7%) of the respondents, who used the website only once a month and seven (6.7%) who used the website

once a week and once in three months respectively. Very few of the respondents, three (2.9%), reportedly never used the website, while three (2.9%) participants did not respond to the question.

Table 5.9: Use of the university website
N=105

Use to the University Website	Frequency	Percentage
Regularly	74	70.5
Once a week	7	6.7
Twice a month	4	3.8
Once a month	7	6.7
Once in three months	7	6.7
Never	3	2.9
No response	3	2.9

Source: Field data (2014)

NB: Data based on multiple responses

5.5.9 Method of contacting subject librarians

In Question 23 the respondents were asked how they contacted their subject librarians. The results are captured in Table 5.10. The result shows that a majority, 110 (78.7%) of the respondents, contacted their subject librarian by visiting them in person, while 22 (15.6%) contacted their subject librarian by sending them an e-mail. Only a few, four (2.8%) of the respondents used SMS and just one (0.7%) posted letters and left messages on a telephone as a way of contacting their subject librarian. On the other hand however, 24 (17%) did not contact their library/subject librarian at all.

Table 5.10: Method of contacting subject librarian
N=141

Contact method	Frequency	Percentage
Visit library/subject librarian	110	78.7
Do not contact library/subject librarian	24	17
E-mail	22	15.6
Send SMS	4	2.8
Dedicated free telephone number	2	1.4
Post letters	1	0.7
Leave messages on telephone/answering machine	1	0.7

Source: Filed data (2014)

NB: Data based on multiple responses

5.5.10 Literacy skills training

In Question 24, the respondents were asked if their institution provided information literacy skills training. The results show that there were more learners, 78 (55.3%), who claimed they were not provided with information literacy skills training, compared to the 62 (44%), who were provided with such training. One (0.7%) participant did not respond to the question.

5.5.11 Mode of training

Question 25 asked the respondents who received such training to identify the mode of training received. The result is captured in Table 5.11. The result shows that the majority, 51 (82.3%) of the respondents, received their training through face-to-face teaching during orientation, while 17 (27.4%) of the respondents received their training through tutorials during residential sessions. There were an equal number of respondents who received their training via e-learning mode and through the module, namely 15 (23.1%) respectively.

Table 5.11: Mode of receiving training
N=62

Mode of receiving training	Frequency	Percentage
Through face-to-face teaching during orientation	51	82.3
Through tutorials during residential sessions	17	27.4
E-learning mode	15	23.1
Through the module	15	23.1

Source: Field data (2014)

NB: Data based on multiple responses

5.5.12 Information sources/services available to learners

Question 26 asked the respondents to indicate which library and information sources/services were available to them. The results are shown in Table 5.12. A major information source/service available was journals for 111 (78%) respondents, followed by newspapers for 102 (72.3%), internet for 94 (66.7%), photocopying for 74 (52.5%), reference sources for 73 (51.8%) and books for 72 (51.1%). The library and information services which were least available from the perception of the respondents were government publications for 41 (29.1%), and the online database and the subject/reference librarians for 31 (22%) respectively, and the online catalogue for 30 (21.3%). The least available information services was interlibrary loans for seven (5%) and microfiche/microfilm for three (2.1%) respondents respectively.

Table 5.12: Information sources/services available
N=141

Information services available	Frequency	Percentage
Journals	111	78.7
Newspaper	102	72.3
Internet	94	66.7
Photocopying machines	74	52.5
Reference sources	73	51.8
Books	72	51.1
Government publications	41	29.1
Online database	31	22
Subject/reference librarians	31	22
Online catalogue	30	21.3
Interlibrary loans	7	5
Microfiche/microfilm	3	2.1

Source: Field data (2014)

NB: Data based on multiple responses

5.5.13 Usefulness library and information sources/services

Question 27 asked the respondents to indicate the library and information sources/services that were useful for them. The results on the useful library and information sources/services as perceived by the respondents are presented in Table 5.13. The result shows that a majority of 125 (88.7%) of the respondents regarded books as their most useful library and information sources

available. Journals and the internet were useful for 114 (80.9%) respondents. Reference sources, newspapers, online databases, the online catalogue and photocopying were useful for 97 (68.8%), 91 (64.5%), 78 (55.3%) and 75(53.2%) respectively. Others such as subject/reference librarians (72 or 51.1%), government publications (69 or 48.9%), and interlibrary loans (54 or 38.3%) were not as useful for the respondents.

Table 5.13: Usefulness of library and information services
N=141

Library and Information Services	Frequency	Percentage
Books	125	88.7
Journals	114	80.9
Internet	114	80.9
Reference sources	97	68.8
Newspaper	91	64.5
Online databases	78	55.3
Online catalogue	75	53.2
Photocopying machines	75	53.2
Subject/Reference librarians	72	51.1
Government publications	69	48.9
Interlibrary	54	38.3
Microfiche/Microfilm	16	11.3

Source: Field data (2014)

NB: Data based on multiple responses

5.5.14 Awareness of library and information services offered to distance learners

Question 28 asked the respondent if they were aware of all the library and information sources/services offered to distance learners. A majority of the respondents 113 (80.1%) were not aware of the library and information sources/services that the library offered. Only 27 (19.1%) of the learners claimed to be aware of the library and information sources/services offered to distances learners.

5.5.15 Library and information services used in the past year

In Question 29, the respondents were asked what library information sources/services they had used in the past year. The responses are summarized in Table 5.14. The result shows that in the previous year, books were the major library and information source used by 114 (80.9%) of the

respondents; followed by journals used by 86 (61%); the internet used by 77 (54.6%); and newspapers used by 71 (50.4%). Other sources/services used included photocopying by 68 (48.2%); reference sources by 37 (26.2%); government publications by 31 (22%); the online catalogue, and online databases by 18 (12.8%) respectively and subject/reference librarians by 15 (10.6%) of the respondents. Interlibrary loans and microfiche/microfilm were the least used library and information sources/services used by the respondents in the previous year.

Table 5.14: Library and information services used in the past year
N=141

Library and Information Services	Frequency	Percentage
Books	114	80.9
Journals	86	61.0
Internet	77	54.6
Newspaper	71	50.4
Photocopying machines	68	48.2
Reference sources	37	26.2
Government publications	31	22.0
Online catalogue	18	12.8
Online databases	18	12.8
Subject/Reference librarian	15	10.6
Interlibrary loans	6	4.3
Microfiche/microfilm	2	1.4

Source: Field data (2014)

NB: Data based on multiple responses

5.5.16 Information needs adequacy

Question 30 asked the respondents if their information needs were adequately met by the available library resources. The results of whether the library resources adequately met the information needs of distance learners is depicted in Table 5.15. The results show that a majority of 98 (69.5%) of the respondents reported that the library resources only met some of their information needs, while 30 (21.3%) of the respondents reported that most of their information needs were met. Only a few, nine (6.4%) of the respondents; reported that all of their information needs were met, while three (2.1%) of the respondents stated that none of their information needs were met.

Table 5.15: Information needs adequately met
N=141

Information needs adequately	Frequency	Percentage
All of my information needs are met	9	6.4
Most of my information needs are met	30	21.3
Some of my information needs are met	98	69.5
None of my information needs are met	3	2.1
Other	1	0.7

Source: Field data (2014)

5.5.17 Problems accessing library resources

Question 31 asked the respondents to provide information on the problems or difficulties they experience with accessing library resources. Table 5.16 shows the problems experienced by respondents when accessing library information resources. The table shows that lack of time to visit the library was a major challenge faced by 55 (39%), followed by outdated textbooks experienced by 37 (26.2%), distance to the library by 23 (16.3%) and lack of space/seating experienced by 15 (10.6%). Other problems militating against access to library resources were a lack of information search skills for 14 (9.9%), poor internet coverage for 10 (7.1%), lack of knowledge of the classification system and the poor relationship between staff and students mentioned by eight (5.7%) of the respondents. Problems less experienced included libraries closed over the weekend for four (2.8%), how to use the online catalogue system and opening hours for two (1.4%) of the respondents respectively. Power blackouts and few libraries in the country were problems identified by one (0.7%) of the students respectively.

Table 5.16: Problems accessing library resources
N=141

Problems	Frequency	Percentage
Lack of time to visit library	55	39
Outdated textbooks	37	26.2
Distance to library	23	16.3
Lack of space/seats in library	15	10.6
Lack of information search skills	14	9.9
Poor internet access	10	7.1
Lack knowledge of classification systems	8	5.7
Poor relationship between staff and students	8	5.7
Libraries used over the weekend	4	2.8
Lack of knowledge on how to use library catalogue	2	1.4
Opening hours	2	1.4
Power blackouts	1	0.7
Few libraries in the country	1	0.7

Source: Field data (2014)

NB: Data based on multiple responses

5.5.18 Solution to problems of accessing library resources

Question 32 asked respondents to indicate what solutions should be adopted to prevent such problems or difficulties experienced. Table 5.17 shows that 37(26%) of the respondents felt that buying more books would alleviate the problem of access to information resources, while 29 (20.6%) were of the opinion that employing the latest technology was a viable approach to solving the access problem. Sixteen (11.3%) respondents felt that opening the libraries over the weekend would solve the problem. Educating users on how to access different information resources, developing good relationships between staff and students, improving the online services, and the establishment of libraries in remote areas for 13 (9.2%), nine (6.4%), six (4.3%) and five (3.5%) of the respondents respectively were solutions to the problems of access to information resources. Proper shelving, proper space/seating, and extra-mural centre having a well-equipped library was seen by four (2.8%) and two (1.4%) of the respondents respectively as possible solutions. Other solutions (although not very significant) include, backup power generators, have distance learning librarians, using interlibrary loans, employing more staff to assist students with electronic media, channeling the information through the university website,

and extending opening and closing hours, were mentioned by one (0.7%) of the respondents respectively.

Table 5.17: Solution to problems of accessing library resources
N=141

Solution to problems of accessing library services	Frequency	Percentage
Buy more books	37	26.2
Employ latest technology networks	29	20.6
Open libraries over the weekend	16	11.3
Educate users on how to access different information	13	9.2
Develop good relationship between staff and students	9	6.4
Improve online services	6	4.3
Establish libraries in remote areas	5	3.5
Proper shelving	4	2.8
Proper space/seating	4	2.8
Extra-mural centres should to have a well-equipped library	2	1.4
Obtain a backup power generator	1	0.7
Have a distance learning librarian	1	0.7
Use of Interlibrary loans	1	0.7
Employ more staff to assist students with electronic media	1	0.7
Channel the information through university website	1	0.7
Extend opening and closing hours	1	0.7

Source: Field data (2014)

NB: Data based on multiple responses

5.6 Use of information and communication technology (ICT)

This section comments on the training and use of ICTs by the respondents.

5.6.1 Training on the use of computers

Question 33 asked the respondents to indicate if they had received any training on the use of computers. The results showed that a majority of 120 (85.1%) of the respondents claimed that they had received training on the use of computers, while 21 (14.9%) stated that they did not receive training.

5.6.2 Mode of training

Question 34 asked the respondents how they had received their computer training, that is, the mode of training. The results on the mode of training received by the respondents are depicted in Figure 5.5. The result shows that less than half, 63 (44.7%); of the respondents arranged training on their own, while 44 (31.2%) of the respondents received computer training at their place of work. Those who received training through a module and during residential sessions included 12 (8.5%) and seven (5%) of the participants respectively.

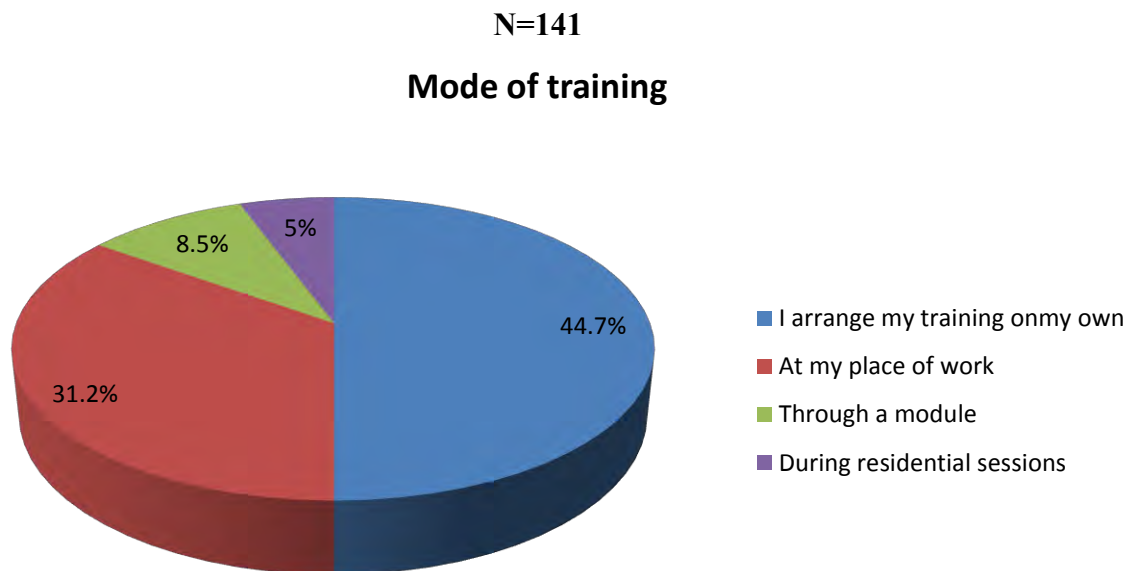


Figure 5.5: Mode of training
Source: Field data (2014)

5.6.3 Computer skill before the distance learning programme

Question 35 asked the respondents to rate their level of computer skills before they started their distance learning programme. The results are shown in Figure 5.6. The figure shows that almost half, 70 (49.6%); of the respondents rated their computer skills as good before they started their programme, while 50 (35.5%) rated their computer skills as fair. Those who rated their computer skills as poor, and those that rated them as good before they started their programmes were 13 (9.2%) and eight (5.7%) respectively.

N=141

Computer skills before distance learning programme

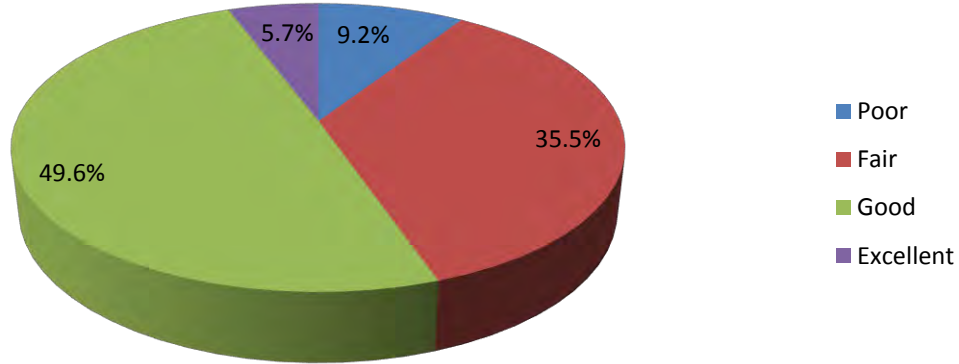


Figure 5.6: Computer skills before distance learning programme

Source: Field data (2014)

5.6.4 Current computer skills

In Question 36, respondents were asked to rate their current computer skills while on the distance learning programme. The results of the respondents on their current computer skills are depicted in Figure 5.7. The results show that more than half, 75 (53.2%); rated their computer skills as good, while 41 (29.1%) rated their computer skills as excellent. Those that rated their computer skills as fair were 24 (17%) while only one (0.7%) respondent rated their current computer skills as poor.

N=141

Current computer skills

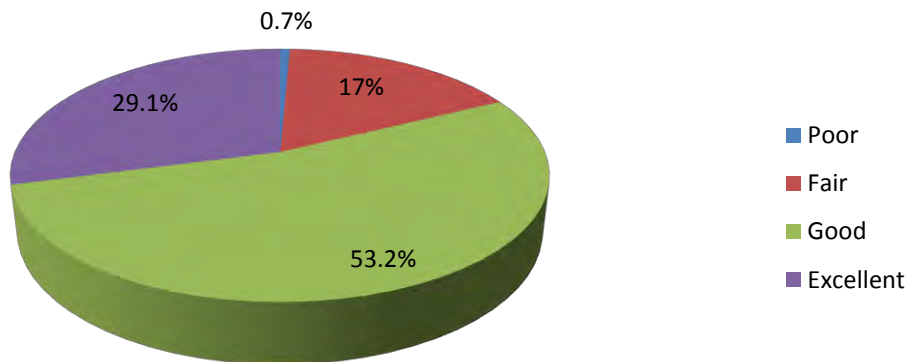


Figure 5.7: Current computer skills

Source: Field data (2014)

5.6.5 Use of the internet or databases to supplement reading and writing of assignments

In Question 37, respondents were asked if they used the internet or any other electronic databases to supplement their reading and writing for their assignments. The results show that all the distance learners, 141 (100%) used the internet or other electronic databases to supplement their reading and writing of assignments.

5.6.6 Payment for the use of the internet

In Question 38, respondents were asked who paid the cost of the use of the internet. The results are shown in Figure 5.8. The results shows that the cost of the use of the internet was mostly borne by the individual respondent or their family for 97 (67.4%) of the respondents while 33 (23.4%) of the respondents stated that the cost was borne by their institution. Eleven (7.8%) of the respondents stated that the internet cost was taken care of by their employer. One (0.7%) of the respondents mentioned that the internet cost was paid for through other sources.

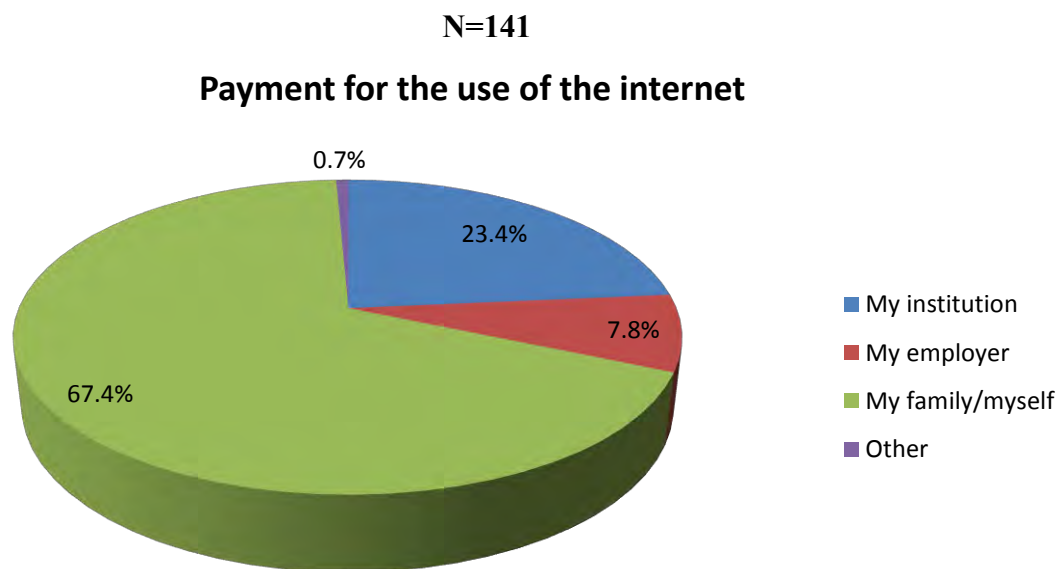


Figure 5.8: Payment for the use of the internet
Source: Field data (2014)

5.7 Barriers and hindrances to meeting distance learners' information needs

The study wanted to establish the main barriers and hindrances to the information needs of distance learners in order to develop possible solutions.

5.7.1 Distance as a barrier or hindrance to information needs

In Question 39, the respondents were asked how far they had to travel to get to the main campus' university library or information centre. Their responses are presented in Table 5.18. The result show that 43 (30.5%) of the respondents claimed that the distance to the university library was between one to 10kilometers, while 42 (29.8%) of the respondents claimed that the distance to the university library was between 11 to 30 kilometres. Eighteen (12.8%), reported a distance of 31 to 50 kilometres, while 15 (10.6%) claimed a distance of 51 to 100 kilometres to the campus library. Twenty three (16.3%) respondents reported that they were more than 100 kilometres away from the main campus library.

Table 5.18: Distance to university library or information centre
N=141

Distance to university library	Frequency	Percentage
1-10 Kilometres	43	30.5
11-30 Kilometres	42	29.8
31-50 Kilometres	18	12.8
51-100 Kilometres	15	10.6
101-300 Kilometres	10	7.1
301- 500 Kilometres	8	5.7
501 Kilometres and above	5	3.5

Source: Field data (2014)

5.7.2 Source of electricity in area

In Question 40, the respondents were asked what was the source of electricity in the area in which they lived. The result showed that permanent power supply was the dominant source of electricity for 130 (92.2%) in their areas of residence. Respondents who reported using alternative power sources included six (4.3%) who used battery power, four (2.8%) who used generators and one (0.7) who used a gas cylinder.

5.7.3 Home study conditions

Question 40 asked the respondents about their home study conditions or circumstances. The result of leaners' home study conditions are depicted in Figure 5.9. The result show that the majority of the respondents 63 (45%) had fairly difficult home study conditions, 54 (38.3%) reported having convenient home study conditions. Respondents who stated that their home

study conditions were good accounted for 21 (15%) and those that reported excellent home study conditions accounted for only three (2.1%) of the respondents. Five (4%) claimed practically impossible home study circumstances.

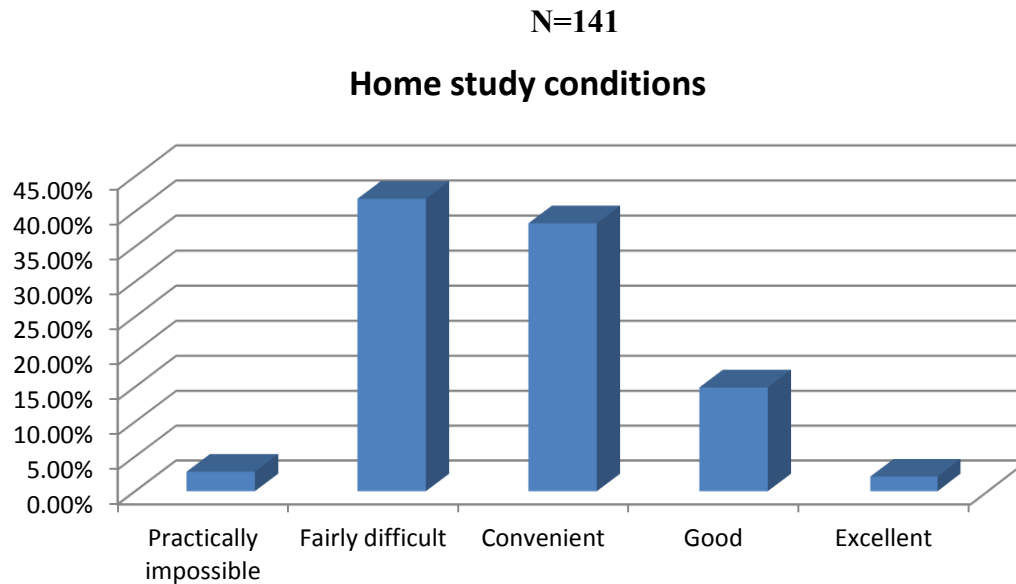


Figure 5.9: Home study conditions
Source: Field data (2014)

5.7.4 Challenges of the distance learning programme

In Question 42, the respondents were asked to include their challenges with regard to studying through distance learning. The results are shown in Table 5.19. The table shows that the respondents did experience challenges with the distance learning programme. The result shows that a majority of the respondents 94 (66.7%) had challenges with how to best plan their time, followed with how to get time to study for 86 (61%) respondents, how to get materials for assignments, tests and examinations for 84 or (59.6%) respondents, and with how to get suitable place to study for 70 (50.4%) respondents. “A challenge for 69 or (48.9%) the respondents was coping with examinations.

Table 5.19: Challenges of the distance learning programme
N=141

Challenges of distance learning programme	Frequency	Percentage
How to get materials for assignments, tests and exams	84	59.6
How to get time to study	86	61.0
How to best plan my time	94	66.7
How to get suitable place to study	71	50.4
How to cope with exams	69	48.9

Source: Field data (2014)
NB: Data based on multiple responses

5.7.5 Barriers affecting use of information sources

Question 43 sought to establish what barriers affected respondents' use of information sources. The results are shown in Table 5.20. The results show that lack of time was a barrier for 99 (70.2%) of the respondents, followed by lack of technical skills for 74 (52.5%) of the respondents. Lack of a well-equipped library, lack of useful materials, lack of equipment, costs and isolation were barriers that affected the use of information for 69 (48.9%), 64 (45.4%), 61 (43.3%), and 59 (41.8%) of the respondents respectively. Isolation as a barrier was indicated by 42 (29.8%) of the respondents. Access to the library system was a barrier affecting the use of information for 42 (29.8%) of the respondents.

Table 5.20: Barriers affecting use of information sources
N=141

Barriers	Frequency	Percentage
Lack of time	99	70.2
Lack of technical skills	74	52.5
Lack of well-equipped library	69	48.9
Lack of useful materials	64	45.4
Lack of equipment and costs	61	43.3
Isolation	59	41.8
Access to the library system	42	29.8

Source: Field data (2014)

5.7.6 Suggested solutions to barriers

Question 44 asked the respondents to indicate how the barriers they mentioned could be overcome. The suggested solutions are depicted in Table 5.21. The table shows that most (36 or 25.5%) of the respondents identified ICT infrastructure as a plausible solution, while 31 (22%) felt time management would be a good solution. Seventeen respondents (12.1%) felt that buying

more books was a solution, while 15 (10.6%) of the respondents felt that the government should provide improved financial support for libraries and more training on ICTs skill for students especially. Seven (5%) of the respondents felt that trained library personnel was a good solution. Enhancement of student-tutor interaction and provision of more libraries tied with five (3.5%) respondents respectively, while equipping branch libraries and government subsidizing the cost of books was the solution proffered by four (2.8%) of the respondents respectively. Inter-library collaboration and the need for institutions to offer services closer to the learners were mentioned by one (0.7%) respondents respectively.

Table 5.21: Suggested solutions to barriers
N=141

Suggested solutions to barriers	Frequency	Percentage
Invest in ICT infrastructure	36	25.5
Time management	31	22
Buy more books for the library	17	12.1
Improving government financial support for libraries	15	10.6
More training on ICTs skills for learners	15	10.6
Trained library personnel	7	5
Enhancement of student-tutor interactions	5	3.5
Have more libraries in the area	5	3.5
Equip branch libraries better	4	2.8
Government should subsidize the cost of books for higher learning	4	2.8
Interlibrary collaboration	1	0.7
Institutions to offer services closer to the learner	1	0.7

Source: Field data (2014)

5.7.7 Additional comments and suggestions

Question 45 asked respondents to provide further comments or suggestions. These comments are shown in Table 5.22. From the lists of comments in the table, it can be seen that 35 (24.8%) of the respondents suggested that the library provide a wide range of useful materials. Five (3.5%) suggested improvement on time management. The need to improve ICT infrastructure was suggested by four (2.8%) respondents. Distance learning was considered important with proper planning, by two (1.4%) of the respondents. Two (1.4%) of the respondents suggested the need to orient distance learners on computer use, enhance collaboration with other universities, and make learning more accessible and cost effective respectively. Other comments include made one (0.7%) respondent respectively included who suggested more training and exposure to distance learners, employing more lecturers, extension of residential sessions, the university

should make crucial information available, distance learning exams should be conducted online, and the establishment of branch libraries of the Kenya Library Services in all remote areas.

Table 5.22: Additional comments and suggestions
N=141

Additional comments and suggestions	Frequency	Percentage
Have a wide range of useful materials	35	24.8
Improve on time management	5	3.5
Improve the ICT infrastructure	4	2.8
Distance learning is important with proper planning	2	1.4
Orient distance learners on computer uses	2	1.4
Enhance collaboration with other universities	2	1.4
Make learning more accessible and cost-effective	2	1.4
Distance learning is a good mode of learning	1	0.7
More training and exposure for distance learners	1	0.7
Employ more librarians	1	0.7
Residential sessions should to be extended	1	0.7
The university should make crucial information available	1	0.7
We should have more distance learners in the country	1	0.7
Distance learning examination should be done online	1	0.7
Establish branch libraries of Kenya Library Services in all remote areas of the country	1	0.7

Source: Field data 2014

5.8 Summary of distance learners' questionnaire

This section presents the results of the questions asked of the respondents. A summary of the results show that distance learners have unique information needs that different from regular students. The results revealed that the respondents had experienced a myriad of information-seeking problems and needs because they usually study independently. Most of them argued that while libraries were available and a range of resources existed, such resources were not easily accessible. The results showed that the reason for this was because respondents were initially not aware of such resources and services, and also lacked the skills (especially in ICT) to search for information and satisfy their needs. The results also show that the respondents had very demanding schedules, covered long distances to attend their courses and that librarians often did not offer much help. The respondents offered some recommendations and suggestions on how the challenges, which they faced could be addressed.

5.9 Presentation of the interviews results

This section presents the results of the interviews that were conducted with staff working with the two universities, that the University of Nairobi and Technical University of Mombasa. As indicated in Chapter One, section 5.3, the study sought to determine the information needs of distance learners, among other issues. In doing this however, it is also important to establish the perception of library staff, not only on the provision of library and information services, with regard to distance learners, but also on satisfying distance learners' information needs. In view of this, the study conducted interviews with members of staff at both the universities. The members of staff included deputy university librarians as the managers of the university libraries in charge of human resources, finances, policy issues and other administrative issues. The other members of staff interviewed included subject/reference librarians. For the purposes of this study, these librarians were deemed to assist with the information needs of distance learners given that in both universities there were no specific librarians or any members of staff dedicated to assisting with distance learners' information needs. In the absence of a designated distance learning librarian, subject/reference librarians were deemed to play that role. Thematic content analysis was used for the qualitative data gathered through the interviews.

5.9.1 Background information

The semi-structured interviews were conducted with 11 members of staff (subject/reference librarians) from both universities and two deputy university librarians, one from each university. The semi-structured interview guidelines for the subject/reference librarians included 32 questions and the deputy university librarians had 20 questions. All schedules included explanations and or descriptions as follow-up questions. The initial part (Questions 1 to 6 of the schedules for subject/reference librarians) included background information such as name of institution, position, gender, highest qualification held and the number of years worked in the library. Questions 7 to 22 focused on specific services offered to distance learners such as pre-planning of distance learning programmes, evaluation of their needs, methods of support to distance learners, adequacy of both print and e-resources for distance learners and human resources available. Questions 23 to 26 sought information on the ICT infrastructure especially access, OPACs and online databases. Questions 27 to 32 involved supply or provision of user education, collaboration with other libraries, and challenges in providing services to distance

learners and how these could be overcome. The last question solicited their comments or suggestions regarding the provision of library services to distance learners.

Similarly, the interview schedule in Question 1 to 6 for the two deputy university librarians also included background information such as name of institution, position gender, highest qualification held, and the number of years' experience in their current library. Questions 7 to 12 focused on delivery of services and management. These included services offered to distance learners, involvement in the pre-planning of the distance learning programmes, guidelines and policies, funding and whether there was sufficient and effective support from the university management in their quest to provide services to distance learners. The next four questions focused on the training of staff who engaged with distance learners, suggestions on the possibility of establishing an information or digital center dedicated to distance learning, their vision and future plans in supporting distance learners, and their collaboration with other libraries or information service providers. The last three questions sought opinions on the main challenges in providing services, the strategies that could be adopted to overcome the challenges and any other comments as a conclusion. For the purposes of establishing a better understanding of the study, it should be mentioned that the background information in terms of gender, levels of education and number of years in experience involved all library staff, including deputy university librarians, hence the relating tables included both. In addition, for the purposes of clarity, the two deputy university librarians were coded as deputy university librarian one (DUL1) and deputy university librarian two (DUL2).

5.9.2 Presentation of the results of the subject/reference librarians

This section presented the results from the semi-structured interviews that were conducted with the subject/reference librarians who in the absence of distance learning librarians were deemed to play that role. Questions 1 to 6 solicited the background information of the library staff.

5.9.3 Gender of library staff

Table 5.23 indicates the gender of the library staff. The table shows that there were 6 (54.6%) female library staff compared to the five (45.4%) male members of staff.

Table 5.23: Gender of library staff
N=11

Gender	Frequency	Percentage
Male	5	45.4
Female	6	54.6
Total	11	100

Source: Field data (2014)

5.9.4 Education levels of library staff

Table 5.24 shows that most members of staff, (five or 45.4%) held diploma qualifications followed by four (36.4%) who had undergraduate degrees. There were two (18%) members of staff with master's degrees. None of the staff had a doctorate degree.

Table 5.24: Education levels
N=11

Education levels	Frequency	Percentage
Diploma	5	45.4
Undergraduates	4	36.4
Masters	2	18.2
PhD	0	0

Source: Field research data (2014)

5.9.5 Work experience of library staff

Table 5.25 shows the work experience of library staff. The table shows that most library members of staff six (54.6%) had between 1 to 10 years working experience in the library. Two (18.2%) of the staff members had between 11 to 20 years working experience in the library. Three staff members each had 21 to 30, 31 to 40, and 40 and above years of experience each respectively.

Table 5.25: Work experience
N=11

Years	Frequency	Percentage
1-10	6	54.6
11-20	2	18.2
21-30	1	9.1
31-40	1	9.1
40- Above	1	9.1

Source: Field research data (2014)

5.9.6 Involvement in the pre-planning of distance learning programmes

In order to gauge the involvement of subject/reference librarians in the pre-planning of distance learning programmes before their implementation Question 7 sought to find out whether they

were involved in the pre-planning stage of the distance learning. Respondents argued that while there was some degree of involvement through meetings, it was not sufficient to have impact on a real plan for distance learners because usually it involved planning or preparing for all students. Respondents also argued that they were often involved after the fact or not at all in the planning. As a follow-up question, the researcher sought an explanation to find out how they were involved. Those who claimed that they were involved explained that they were involved through meetings such as those of Academic Boards (among others) attended by the librarian or any other senior members of staff. Those who claimed not to be involved argued that they were brought on board only at the implementation stage which usually caught them “off guard” and they were not given notice that such programmes needed to be implemented. One subject librarian interviewee claimed that; “branches (of campuses) are opened without the input of the librarians and they end up without libraries for some time”.

5.9.7 Provision of services to distance learners

The respondents were asked whether their libraries provided a service for distance learners. Nine (81.8%) out of eleven respondents replied in the affirmative. In a follow-up question, they were asked to list the kind of services which they offered. They listed e-resources and book loans in Extra Mural Centres (EMCs), literature searches through e-mailing and the use of mobile phones and digital repositories. One respondent claimed that they had a “document delivery” service and one claimed they had an “online examination bank for students to access.” Those who responded in the negative cited lack of access, and some respondents stated there was no budget for provision of services to distance learners.

5.9.8 Regular evaluation of needs of users

Questions 11 to 13 sought information on the evaluation of users’ information needs. In order to investigate whether the university library evaluated the needs of the users regularly, (especially distance learners’ needs) a follow-up question was asked to explain how such evaluations were conducted. A majority of eight (72.7%) respondents replied that they did not evaluate the information needs of their users. Only three (27.3%) answered in the affirmative. Those who claimed not to evaluate their users’ needs explained that there was “too much work,” while some claimed they were not aware of such activity or had no qualifications. A subject librarian

respondent commented that; “in this academic institution it is assumed that the needs are defined by the curriculum and the course outline”. Another subject librarian added that: “the library management team has not come up with the method of evaluating the needs and again it is assumed that the student knows and understands the library”.

5.9.9 The most appropriate methods to support distance learners information needs

In Question 15 the study sought to establish the most appropriate methods to support the information needs of distance learners. While nearly all the respondents replied that the e-resources were the most appropriate to support distance learners, some argued or supported the following as the most appropriate methods:

- To have library staff specialize in dealing with distance learners;
- Setup remote libraries and carry out regular orientation, Current Awareness Services (CAS) and Select Dissemination of Information (SDI) services;
- Update ICT infrastructure, update and subscribe to current and relevant full-text databases;
- Regular training of both staff and students on remote access of e-resources and databases; and
- Use websites, e-mails, mobile phones for provision of e-information and equip libraries with sufficient books and journals and extend longer loan periods to distance learners.

5.9.10 On-campus or satellite libraries to cater for the needs of distance learning students

Question 16 sought the views of the respondents on the availability of campus or satellite libraries/centers that catered for the needs of distance learners. Eight (72.7%) respondents stated that they had campus or satellite libraries and three (27.3%) stated that they did not have campus or satellite libraries to cater for distance learners.

5.9.11 Sufficient printed books, journals and other printed resources

In Question 17 to 18, the respondents were asked whether there were sufficient printed materials such as books, journals and any other printed resources for distance learners. Responses revealed that more printed resources were needed all the time. Respondents cited the perennial shortage of

funds, costly printed materials and expensive materials imported from overseas as reasons for the shortage of printed resources in the libraries.

5.9.12 Sufficient e-resources, e-books and journals and relevant online databases to support distance learners

Question 19 to 20 required the respondents to comment as to whether there were sufficient e-resources as these are some of the methods regarded as solutions to distance learners' information needs. Nearly all the respondents agreed that there were insufficient e-resources in their libraries and that they could do with more resources given that technology is always evolving. A number of reasons were offered as to why the e-resources were insufficient by the respondents. They argued that there were never enough funds, lack of trained staff to work with new databases and technology, and that most of the e-resources and equipment was imported from overseas and was expensive.

5.9.13 Human resources capacity in the libraries

Human resources (HR) are regarded as the most important asset in any undertaking or organization. In order to investigate if there were sufficient HR resources in the libraries, Question 21 asked respondents for their opinions on human resources capacity in their libraries to support distance learners. As a follow up Question 22 sought reasons for lack of HR capacity. Respondents replied that there was never enough staff in libraries despite the ever growing number of students. They provided the following explanations:

- No members of staff dealt specifically with distance learners hence there was no personalized staff for such learners unique needs;
- Shortage of staff especially for online searches;
- Some members of staff were employed without proper qualifications;
- Some members of staff were not motivated enough since they are related to management; and
- The members of staff who serve regular students were the same ones expected to support distance learners and this was a challenge.

One respondent made the following observation, “the Government directive to freeze public employment has affected our libraries”. Another respondent said that; “there is a shortage of staff even in the main libraries and we never have enough thus making it difficult to send some to the satellite campuses to support services there”. A third respondent added that; “while the main library did not have enough staff some of them were employed without library work qualifications or have different qualifications thus compounding the problem since they lack knowledge and motivation”.

5.9.14 ICT infrastructure

Adequacy of ICT is considered essential and a good solution in supporting distance learners’ information needs. For this purpose, Questions 23 to 26 solicited information on the adequacy of the ICT infrastructure in supporting distance learners’ information needs. Some of the respondents argued that while there were some modest attempts to improve on ICT infrastructure, such efforts were not adequate. Other respondents stated that there was inadequate ICT infrastructure to support distance learners’ needs. A number of reasons were given for these answers. Those who supported the ICT initiative suggested that all users could access the library remotely through their laptops and cited OPACS as the most offered electronic service. Others cited online databases, e-books and e-journals and websites as some of the online services, which they offered. One respondent stated as follows:

“The distance learners can access the OPAC from anywhere they are through the library website and the online databases can also be accessed by distance students from the comfort of their homes or work places through the remote access option”.

Those who did not support the adequacy of the ICT infrastructure in providing online resources for distance learners cited a variety of reasons. These ranged from limited online access due to limited number of subscribed databases, lack of access to subscribed databases, lack of internet access, lack of staff and trained staff in ICTs at the branch libraries, power supply and outages, lack of high capacity servers and monitors in libraries, lack of space for more monitors and restricted password access. One respondent gave the following explanation; “online access to

databases is limited. Passwords are only available for only four subscribed databases out of more than twenty. This limits the range and diversity of online resources”.

5.9.15 Provision of user education to distance learners

Provision of a well-designed user education programme is considered to be one of the vital segments of library work in guiding users to the right information for their needs. Question 27 was asked to determine whether user education was offered to distance learners and a follow up question asked respondents to provide reasons for their answers. Nine respondents (81.8%) argued that they provided some form of user education, albeit in various forms. Some respondents provided orientation, while others provided information sessions and/or information literacy to all newly registered students. Those who replied in the negative explained that there was no “infrastructure” in place to provide user education to distance learners.

5.9.16 Collaboration with other libraries or information service providers

Questions 28 to 29 were asked in order to investigate whether there were any collaboration efforts with other libraries or information service providers. Nine (81.8%) respondents conformed there was no collaboration and only two(9.1%) agreed that there was such collaboration. Of those who responded in the affirmative, one (9.1%) explained that there was collaboration through interlibrary loans (ILL) and the other one described that the collaboration involved “Google scholar, Opendoor, and Lexisnexis”.

5.9.17 Main challenges in providing library and information services to distance learners

In Question 30 to 31 the researcher sought to establish from the respondents information about the main challenges they faced in providing library and information services to distance learners. A follow-up question provided the respondents with an opportunity to comment or suggest any strategies that could be adopted to overcome such challenges. The main challenges cited by all respondents included lack of sufficient staff, lack of distance learning staff, poor ICT infrastructure, lack of orientation for distance learners, physical distance, frequent power failures, and that libraries were not user friendly. Others cited busy work schedules, closure of libraries during weekends and evenings, and one respondent argued that students often do not

attend user education or even orientations in the time period allocated. As a solution to the above challenges, a variety of suggestions were offered including the following:

- More staff are needed and extended opening hours at weekends or at night;
- Provide alternate sessions on user education;
- Librarians to be involved in the planning or setting-up of new satellite or campus branches;
- Librarians to do regular user education for all users and to hire more staff to assist distance learning;
- Increase internet bandwidth;
- Make orientation a compulsory activity and not an optioned or voluntary attendance; and
- More support from management was required for distance learning.

5.9.18 Additional comments and suggestions

The last question, Question 32, sought additional comments and suggestions from the respondents. Four (36.4%) gave additional comments. One (9.1%) respondent just said “we can do better”. Another added that distance learning students should enjoy the same services as full-time students “because at the end the product is the same for the market”. The other respondent suggested that; “the staff handling distance learners information needs require special training for that service and research studies should involve them on their needs and give them more customized services developed through profiling and targeting them.” The last respondent commented as follows:

“Distance learning is gaining momentum and therefore requires every support from all stakeholders to make it more effective and therefore the idea of establishing information centers or digital libraries in the country could not come at a better time”.

5.9.19 Results from the deputy university librarians

This section presents the results from the semi-structured interviews conducted with the two deputy university librarians. It should also be noted here that deputy university librarians are members of various crucial management committees and are therefore very busy Heads of Departments (HoDs). They are committed to handling administrative matters; not only of their

departments but also are members of various management committees of the University, such as the Council, the Senate, Management Committee, Deans Committee, Academic Board and The Library Advisory Committee, among others. The University Chancellor may also at his own discretion appoint the deputy university librarian to any other committees including Chairmanships of the Graduation Committee, Public Complaints Committee (Ombudsman), and Staff Development Committee. Deputy university librarians have therefore very tight schedules and timelines, and it is often difficult to secure face-to-face interviews with them.

5.9.20 Delimitation

Background information can influence how respondents answer questions. While Questions 1 to 6 gave the results of the gender of the respondents which may not be a key variable when compared to the importance of deputy university librarians, the education levels and work experience of staff play a key role in the way in which staff relate with their users. Skills including interpersonal skills, teamwork, customer care and good public relations are indispensable in the delivery of a vital service required in the university library.

5.9.21 Involvement on the pre-planning of distance learning programmes

The interview schedules for deputy university librarians were slightly different from those of the subject/reference librarians. Most questions for the deputy university librarians were primarily on management issues. Question 7 however, sought similar information from the deputy university librarians on whether they were involved in the pre-planning of distance learning programmes. DUL1 agreed that the library was involved in the pre-planning of distance learning programmes and as-a-follow-up question stated that all new courses (including those for distance learning) are discussed at Senate and University Management Board. Furthermore the library is involved at all levels through representation by librarians as an Academic Unit. DUL2 disagreed and explained that the library is never involved in curriculum development. DUL2 made the following statement in this regard;“ we are only ambushed after the students have reported in class to organize for their reading materials/information sources”.

5.9.22 Library guidelines and policies relating to library service provision to distance learners

This section dealt with policies and service provision to distance learners. Policies and guidelines are regarded as essential instruments and can offer excellent guidance and decision making processes within departments and organizations. Questions 8 to 10 therefore asked respondents whether there were any guidelines and policies regarding library service provision to distance learners. As a follow-up the respondents were also requested to explain if there were indeed provision of library services offered and to describe the type of the services that were offered. DUL1 responded that they had policies and guidelines and added “we follow the Commission for University Education (CUE) standards for education programmes”. DUL1 further explained that all students (including those enrolled for distance learning programmes) borrow from libraries nearer their locations with concessions for longer periods. The respondent further stated that distance learners request literature searches and documents through mobile and e-mail services and more (distance learners) benefit from services provided in Extra Mural Centres (EMCs). DUL2 responded that they did not have any guidelines and policies but stated that they provided services through the e-resources, OPAC and the ‘ask a librarian’ service which was available 24 hours of the day.

5.9.23 Budgets for providing information services for distance learners

One of the key factors for providing effective and adequate services is the allocation of sufficient funding. Question 11 sought to establish the budget allocation for providing information services to distance learners, and a follow-up question requested respondents to explain their answers. DUL1 stated that there was sufficient support from the management and articulated that the library is given an annual allocation for purchasing print resources (including those required by distance students) and also subscribed to several online databases that are accessed by all students including distance learners through EMCs near their locations through library portals. DUL2 was categorical that there was no budget for distance learners per-se, but added that “the library budget doesn’t discriminate students but cuts across all the students”.

5.9.24 Support from the university management to provide efficient and effective services to distance learners

Management support is crucial in carrying out departmental functions in a university. Question 12 sought to establish whether there was sufficient support from the universities' management to provide efficient and effective library services to distant learners. DUL1 stated that the library was given an annual allocation at central management level for the provision of services to all students including distance learners. DUL2 stated that there was insufficient management support and further explained that the library budget was always reduced or revised downwards and this badly affected library plans and that with limited or dwindling budgetary allocation distant learning issues were always ignored.

5.9.25 Training on how to deal with distance learners

Question 13 asked the respondents about training. The researcher wanted to establish from the respondents whether any training was provided to staff on how to deal with distance learners. DUL1 responded that all library staff were trained to serve both regular and distance learners. DUL2 stated that there was no training provided for library staff to deal with distance learners.

5.9.26 Establishing information centers or digital libraries dedicated to distance learners

Question 14 wanted to establish the opinion of the respondents on the idea of establishing information centers or digital libraries dedicated to distance learning. DUL1 stated that; "This was long overdue. I am delighted that a number of libraries are working on digitization of local content. This will facilitate sharing of depository contents available through open DOAR. Distance learners wherever they are will be able to access the information through open DOAR". DUL2 responded that "it was a well thought out idea".

5.9.27 Current or future plans to support distance learning students

In Question 15, the researcher asked the respondents about their current or future plans in regard to distance learners. DUL1 explained that they were in the process of making plans with Course coordinators of various courses to have distance learners request information through mobile and e-mail platforms and added that "the library has to service requests of not less than 600 in the

current (2014) financial year as a target”. DUL2 replied in the negative and explained that “they lack a distance learners’ information service policy”.

5.9.28 Collaboration with other libraries or information service providers to provide services to distance learners

Collaboration with other similar service providers has been used to meet shortfalls in some organizations. Question 16 asked the respondents if they had any collaborative plans with any organizations and to describe such collaboration. Both DUL1 and DUL2 replied that they had no such collaborative arrangements.

5.9.29 Respondents’ views on the main challenges in providing library and information services to distance learners

Question 18 sought the views of the respondents on their main challenges in providing library and information services to distance learners. DUL1 listed the following challenges:

- Rapid increase in enrolment for distance education courses in recent years;
- Increased demand for distance mode of learning by working retirement bound persons, those retired and those working for alternative employment and promotions; and
- Lack of competence among distance learners particularly in accessing e-resources.

DUL2 responded as follows:

- Inadequate skilled staff and inadequate budgetary allocations;
- Inadequate human resources (understaffing staff);
- Low morale of staff due to lack of promotion or upgrading even after acquiring the relevant qualification;
- The concept of distance learning has not yet been “conceptualized” in the university; and
- Inadequate ICT equipment and facilities (infrastructure) and frequent power blackouts.

5.9.30 Strategies that can be adopted to overcome the challenges

As a follow-up to Question 18, Question 19 asked the respondents how they could overcome such challenges. DUL1 listed the following solutions:

- Arrangements are being (have been) made to facilitate access by distance learners to library services in EMCs that are distributed across the country;
- Training sessions are organized in various centers to enhance e-resources skills among distance learners;
- Working closely with the teaching fraternity to ensure that distance learners are provided with library services; and
- Take advantage of existing developments in ICT to reach out to distance learners.

DUL2 provided the following strategies:

- Back-up systems, for example, acquire a backup generator;
- Develop proper policies which cater for distance learners' unique needs;
- Offer in-house training for library staff;
- Develop library staff capacity to deal with distance learners;
- Increase budget allocation for libraries; and
- Improve ICT infrastructure.

5.9.31 Additional comments and suggestions

The respondents were asked to offer any additional comments in Question 20. DUL1 added the following comments:

- Subscribe to more e-books and e-journals;
- Develop in-house databases and make contents available on the internet for use by distance learners; and
- Libraries serving distance learners should develop resource-sharing mechanisms to facilitate effective exploitation of existing library resources. For instance having a common repository which can be shared by serving students from other universities and colleges staying in the neighborhood.

The other respondents' had just one comment which was to establish designated positions of distance learning librarians to handle the information needs of distance learners specifically.

5.9.32 Summary of scheduled interviews

This section presented results from the data collected from the semi-structured interviews collected from the library staff, including the deputy university librarians. The results showed that the staff were aware of the many problems that distance learners face due to library services that were planned to serve all registered students irrespective of the unique and different needs of distance learners. The respondents argued that while they may offer some services to distance learners they do so under very difficult circumstances due to the perennial staff shortages, the ever diminishing budgetary allocations, poor ICT infrastructure and modest support from the university management. The results also showed that there is an increase of distance education programmes in various formats, without including the librarians in the planning. The respondents offered some recommendations, suggestions and possible solutions in order to improve the provision of library and information services to distance learners.

5.10 Summary of the chapter

Chapter Five presented the results of the study. The research data was collected mainly from the supervised questionnaires administered to distance learners and the semi-structured interviews with deputy university librarians and subject or reference librarians. A total of 165 questionnaires were distributed to the two universities and 141 were returned. The semi-structured interview guidelines were distributed to 11 members of staff in both universities who were all interviewed. The results from both the questionnaires and semi-structured interviews answered the key questions underpinning the study. The results are discussed in detail in Chapter Six.

CHAPTER SIX

DISCUSSION AND INTERPRETATION OF THE FINDINGS

6.1 Introduction

In Chapter Five, collected data was analyzed and presented. In Chapter Six, an interpretation and discussion of the major research findings of the study is presented in light of the research problem which was presented in Chapter One and the results presented in Chapter Five - most of which will be discussed to ensure completeness of the discussion and interpretation of the findings. In addition, the conceptual framework in Chapter Two; and the literature reviewed in Chapter Three will be linked to this chapter interspersed with the research methodologies of Chapter Four.

The main purpose of this chapter is to explore the meaning of the findings which could provide the solution to the research problem and offer support to the conclusion and recommendations of the study. According to Babbie and Mouton (2006:101), the reason we interpret data collected is for the purpose of drawing conclusions that reflect the interests, ideas and theories that initiated the research or inquiry in the first place. Olsen (2012) observed that ‘to interpret’ does not mean to simply describe what people said. Indeed if research just reproduced its sources, there would be little or no value added. In that case, there would be no such thing as sociological knowledge or scientific expertise. However, an expert or sociological researcher can probe the data in ways that can or may lead to new conclusions, novel findings, policy proposals or changes.

While social research may have its faults and limitations, the main objective of any research is the process of finding solutions to problems through planned and systematic collection, analysis and interpretation of data (Powell 1992:2). In the process, new knowledge and understanding is derived with regard to the problem. According to Kothari (2004:244), interpretation is the process through which the factors that seem to explain what has been established by the researcher in the course of the study, can be understood better and can also provide further or new concepts as guidance for further research.

6.2 Overview of interpretation

The purpose of the study was to examine the provision of library services for distance learners in academic libraries in Kenya. The underlying objective was to investigate the information-seeking behaviours and needs of distance learners; the support that academic libraries provide to distance learners; and whether librarians are actively involved in the pre-planning of distance learning education in Kenya, among other issues in order to appropriately prepare well for this calibre of students. Two public universities, University of Nairobi and Technical University of Mombasa were selected due to reasons underlined in Chapter Four, section 4.4. While data collection was undertaken in line with the objectives of the study, its primary aim was to establish the basis for initiating strategies and possible solutions, guidelines and standards to improve distance education, not only in Kenya but also in other parts of Africa, as well as other developing parts of the world. This was systematically conducted in order to answer the following key questions which were developed for this purpose as follows:

- 1) What were the information needs of distance learners in Kenya?
- 2) What were the library services offered to distance learners in Kenya?
- 3) What support do distance learners receive on user education or orientation programmes?
- 4) What challenges do distance learners face in accessing library services?
- 5) What strategies can be adopted to overcome these challenges?

In order to answer the above questions, the study adopted Wilson's 1996 model of information-seeking behaviour and the Resource-based Learning (RBL) model (MDE 1994) which formed the conceptual framework for this study. The above questions were consistent with Wilson's (1996) model of information seeking behaviour and needs of the users who make direct demands on the information systems or other information sources in both university libraries. Depending on the success or failure of the users' demands, this is fundamental to Wilson's model given the constant and continuous effort to meet the ever changing needs of users in a very dynamic and ever changing information environment. The Resource-based Learning model (MDE, 1994) is fundamental to independent learning, adequacy of information resources, staff and finances as well as all the infrastructure and services offered.

Both quantitative and qualitative data were collected through a questionnaire administered to distance learning postgraduate students; and semi-structured interviews administered to deputy university librarians and subject/reference librarians (who were deemed to be handling distance learning students in the absence of designated distance learning librarians). The questionnaires included personal information such as gender, age, place of residence and the institutions which participants attended. The questionnaires also included questions regarding the students, information needs and information-seeking behaviours as distance learners; library services available, ICT infrastructure, their IT skills, and the barriers and hindrances in acquiring information for their programmes, as well as options for and possible solutions to improve the availability of information to satisfy their learning needs.

6.3 Demographic data and profiles of respondents

The Wilson's (1996) model of information-seeking behaviour developed from Wilson's model (1981) as described in Chapter Two, section 2.5.4 positions the information user as the focal point among all variables. Accordingly, it became necessary to describe the respondents involved in the investigation of the survey. A total number of 141 distance learning postgraduate students were surveyed. These were described generally in terms of gender, age range, name of institution, programme and year of study and where they lived. Fundamental demographic data for librarians involved gender, position held, years of experience working in that library in that position and highest academic qualification.

According to the data presented in Chapter Five, it was revealed that the student's ages for enrollment ranged between 21 years old to 56 years although the majority of participants were male students (60.3%) enrolled for distance learning courses than female students (39.7%). The highest age range for these respondents was the age range between 31 to 35 (23.4%) and the lowest was that of 56 years which accounted for only 2.8% of the students. The data also revealed that Master degrees students were the most enrolled students (74.5%) while PhD courses were the least enrolled (1.4%). It also emerged that a majority of the students were in their first year (72.3%) and 1.4% of the students were in their third year. The results also revealed that almost a half of the students lived in towns (47.5%) while those who lived in the village accounted for only 18.4%.

In terms of library staff interviewed, it emerged that the female members of staff were the dominant work force (54.55%) as opposed to male members of staff (45.45%) thus confirming the myth that the library profession only attracted female workers. The education levels of staff revealed that most members of staff held post graduate diploma qualifications (46%) followed by degree holders (36%) and only 18% had Masters degrees. Among the respondents interviewed there were no members of staff who held a PhD qualification. The Standards and Guidelines for University Libraries in Kenya (2012) does explicitly offer any guidelines for qualifications of library staff although it stresses that the deputy university librarian should be one of the Chief Officers of the University and member of management; that librarians should have academic status; be on the same terms and conditions of service as those for teaching or academic members of staff, although this last portion is routinely ignored by university management.

From these descriptions, it can be concluded that the data collected and presented in Chapter Five was a good combination of stratum and constituted a balanced population sample. All categories of respondents and interviewees had the basic characteristics required for this study. In terms of the distance learning students, they were all selected from those enrolled for postgraduate distance learning programmes. The students were a mixture of year one to third years in a postgraduate programme with many years of exposure in the use of libraries, hence seemingly with enough knowledge and exposure to challenges they faced as users. The library staff also had adequate educational background; and years of experience thus provided relevant, valid and reliable responses that suited this study in accordance with its design.

6.4 Findings based on the research questions

This study involved five research questions as noted earlier. The discussion of the findings will therefore follow the order of the research questions of this study as presented in Chapter One, section 1.3.2.

6.5 Information needs of distance learners at the universities

The information needs of distance learners were briefly discussed in the introduction of this study in Chapter One, section 1.3, and exhaustively addressed in Chapter Three, section 3.3.8. In these sections, it was demonstrated how various studies have confirmed that there was need to

undertake further research in order to address the unique needs of the distance learning students. A study by Gandhi (2003) established that the information needs of distance learners were the same as those of campus or full-time students and that they needed access to information whenever they wanted it, wherever they were, easily, as fast as possible and at their convenient time. A study by Wasike and Munene (2012), in Kenya concluded that not much had been achieved in carrying out user studies to establish the information needs of distance learning students. Indeed many other studies have concluded that due to the circumstances and environment of the distance learner in terms of distance, isolation and odd hours of attending lectures; it is inevitable that the distance learner has unique information needs which need to be addressed in order for these needs to be met on equal terms as those of full-time or campus students.

Almost all of Wilson's models have placed the 'information user' as the focus of the needs and barriers represented by the interacting variables. Wilson's model (1996) used for this study however has placed the context of the 'information need' as the main focus of the user. This is complimented by the other Resource-based Learning (RBL) model which has offered the way forward for distance learners whose study environment and circumstances lead to their unique needs. In view of the foregoing, the first research question sought to establish the information needs of distance learners. The students were asked to provide reasons for which they require and seek information to meet their study needs.

This section discusses the information needs of the study participants. The results revealed that distance learners' needs emanated from the context of their studies or a particular situation. This is a value highly regarded by Wilson's (1996) model, being the first variable in that model. Consequently it emerged that the distance learners needed information to solve a problem; to carry out a task or to find an answer to a question. The most information need according to the distance learners was for the purposes of preparing for examination (87.2%), followed by the need to write assignments (57.4%) and tests (51.1%). Looking for information to prepare for lectures was less of an information need and was experienced by 30.5% of the distance learners. This scenario would suggest that distance learners were only concerned with the successful completion of their studies and passing their examinations and assignments rather than actively

participating in lectures with prior knowledge or information about the topic or subject. This could be interpreted to mean that they are passive learners, keen only on passing their examinations and assignments.

Some of the literature reviewed in Chapter Three such as that of Bell (2004) confirms that the connection or interaction with lectures is of little concern for distance learners or distance learning practices. Unwin, Stephen and Bolton (1998) also confirmed that postgraduate students prefer independent learning (also known as learner autonomy). This conforms with the Resource-based Learning model, learning system based on the principal of identifying and securing information for students' needs and challenges. In this model, students take decisive measures based on that information thus making use of learning resources either as individuals or as groups.

6.5.1 Mode of delivery of modules, lessons and lectures for distance learners

Distance learners provided data on the mode of delivery of their modules lessons and lectures to satisfy their information needs for the success of their studies. It emerged that contact sessions at the main campus were the major mode through which 66.7% of the distance learners received their lessons; followed by study guides for 43.3% of the learners; contact at a distance campus was the mode of delivery for 40.4%; and 22.7% received their delivery of modules, lessons and lectures through the web or online. Given that distance learners are 'technically remote students', the contact session at main campus could be interpreted to mean that this happens during the period that distance learners visit the main campus.

According to the reviewed literature, distance learners primarily receive their learning through modules and study guides delivered to them manually. This however, came second in the current study. Kavulya (2004) stated that the University of Nairobi was the first to establish what was then called 'correspondence' or 'extra mural studies'. This culminated in what is today known as 'distance education' with the admission of 594 students in 1986. In the same study, it was observed that distance education programmes continued being based on the correspondence system with a few contact hours when lecturers visited regional centers. This is practice that is still employed by a number of other universities such as Kenyatta University (KU) and

Strathmore University (SU). This again confirms that despite the advent of technology, this type of learning is still practiced. Ideally the best channel would be through the web or online. This was not a popular mode of delivery. This could be attributed to lack of ICT infrastructure, electricity or lack of relevant databases or even lack of knowledge of the existence of the available resources by the distance learners, among many issues due to ignorance or lack of orientation.

6.5.2 Satisfaction of packages received

It was important to establish or measure the satisfaction of the distance learners in terms of the modules, study guides and online packages which they received in order to find out if these (packages) adequately met their needs. A majority (67.4%) of the students were of the opinion that the packages which they received from their institutions were not sufficient to meet their information needs, while only 32.6% considered the packages sufficient to adequately meet their information needs.

The reviewed literature has offered some suggestions on user satisfaction. While most of Wilsons' models, have indicated or placed the 'information user' as the main focus. Wilsons' 1981 and 1996 models used for this study has gone a step further and placed 'user satisfaction' as an integral part of the model. They have also offered an escape route when demand upon the system or service results into failure through the information feedback loop. On the other hand, most libraries have over the years implemented what has come to be known as user education, user orientation and information literacy among others. More often than not, the objective is to satisfy an information need of a person. Kuhlthau (1993) suggested that an information need in information science evolves from a vague awareness of something missing. This culminates in locating the information that satisfies the need or understanding of the circumstances. Other researchers have described 'information' as a gap in an individual's knowledge in a sense-making situation where information is a requirement in our everyday life. If we do not perform our tasks satisfactorily there is need for sufficient information. This is also confirmed by Dervin and Nilan (1986). Therefore, 32.6% of the students who were not satisfied would have to find alternate information to supplement their modules, study sources and online packages.

6.5.3 Other sources used

As already reported in section 5.3, distance learners have unique information needs. Given their study situations and circumstances as remote learners, they tend to seek other sources of information to satisfy their needs. Distance learners were asked what alternative sources they used. The results showed that amongst other sources used; the internet was the most commonly used information source (88.7%) followed by lecturers (60.3%), library resources (53.9%), colleagues (38.3%), e-mail correspondence (36.9%) and Course Coordinators (20.6%). Radio and telephone were used equally by 9.2% of the students.

Given the circumstances of distance learners as remote learners and the current global trends in ICT it was not surprising that the internet was the most used alternate source of information by the students. There have been several arguments on the usefulness of the internet in academic forums, including the use of ‘Google’ and ‘Google scholar’. In a study by Idonboye-Obu (2013), it was confirmed that these search engine databases were used, among many others. Due to the circumstances of distance learners in terms of distance from libraries (with access to computers or databases), scarce or non-sources of electricity and rare ICT infrastructure, this remains a challenge. On the other hand, Joyner, William and Glatthorn (2013) posited that the availability of the internet has made and continues to make what he labeled as the ‘disserting process’ easier. In this modern technological world, the ability to search for relevant information from the internet through smart phones, tablets, and laptops is indispensable. However while searching for information is easier and quicker in terms of research, the major concern is the credibility of the information downloaded, although enhanced references and bibliographies published can and will provide credibility.

The teacher or lecturer has always been highly regarded as a source of information. Over the years, the teacher was regarded as the ultimate custodian of knowledge. It was and has generally been accepted that what the teacher says is correct since the teacher was regarded as the ultimate authority, especially in the class. However as indicated in Chapter Two, section 2.5.5; the RBL model used for this study indicates that an educational student-centered model helps students ‘learn how to learn’ also makes them more accountable on their own. This results in an element of shifting from what has come to be accepted as the standard practice in teaching; namely that

of ‘teacher telling’ to active learning with the resources at hand. This methodology would fit very well with the circumstances of distance learners.

6.5.4 Information formats

Due to the uniqueness of distance learners’ experiences, it was important to ask them about their preferred information formats. It emerged that a majority of the distance learners preferred their information in electronic format (60.3%) with 29.8% preferring print sources. Audio-visual format was the least preferred source of information (8.5%). This is not surprising given the study circumstances of distance learners far removed from the university, separated from libraries and studying in isolation. Many of the distance learners are working people and would most likely turn to office computers to seek information, hence the use of the internet and other electronic formats to satisfy their information needs. A study by Fahad (2010) suggested that ICT is a good solution in solving some of the distance learning challenges through e-libraries and e-learning. This concept of academic e-learning as core tool for distance learners would give distance learners open access to materials through the library website to various online databases.

While the advent of ICT has become ubiquitous with national development especially in developing countries, it has also changed the ways and patterns in which information and other services are dispensed. A study by Wawire and Omboi (2010) noted that the only way to satisfy user demand is to use ICTs in information services delivery. Therefore, librarians and libraries must adopt ICTs in order to remain relevant in the face of challenges and constant changes. Print sources have also been obvious sources for library users. However, according to the distance learners they were not the most preferred formats due to a variety of challenges such as distance and limited opening hours of libraries (especially during weekends when most distance learners are more likely to visit). However, Oladukun and Aina (2009) stated that a majority of distance learners would prefer print formats because this is what they have used most of their lives and is thus more accessible to them than the other formats such as electronic and audio-visual formats. The reason given for this is that the two formats involve the use of electricity which may not be available in the homes of distance learners and that costs of some of those materials may not be affordable to them. These sentiments were also echoed by some of the distance learners. Wilsons’ (1996) considers information processing and use as a key element for the information

user and compliments the RBL model which as Noble (1980) noted is essential for course related problems as well as solving learning challenges. Thus students required accesses to mostly electronic resources to assist them with their studies.

6.5.5 Information resources used in the last year

As a follow-up to the most preferred format and in order to find out the most recently used popular resources and sources by distance learners; the learners were asked about the information resources they used in the last year. The results in Table 5.4 showed that books remained the major source used by 86.5% of the distance learners followed by the internet used by 80.9%, lecturers used by 68.8%, photocopying machines used by 62.4%, study guides by 61%, newspapers by 46.8% and e-mail by 44%. Other information resources and sources used in the past year were references sources (39.7%), tutors (36.9%), television (24.1%) and radio (21.3%). Online databases were used by 14.9%, and interlibrary loans by 4.3%. Microfiche/microfilm were used by two learners (1.4%) were the least used information resources by the distance learners in the previous year.

The use of books as the most preferred resource could suggest that while the internet may be the most preferred electronic resources, lack of access or facilities (ICT infrastructure) could hinder the regular use of these resources by distance learners. Students thus opted for the next available resource namely books. Information currency of these books is debatable given that most of distance learners often resorted to the use of public libraries for their information needs. A study by Oladukun and Aina (2009) showed that the type of library most used by non-traditional students was the public library. The next sources of information used in the recent past included lecturers, study guides, journals and newspapers. Given the circumstances of distances learners, this is not surprising because the lecturer or teacher is the obvious source of information during their sparse interactions. However, the RBL model recommends that learners should be actively involved in using the resources at hand and shift from the ‘teacher telling’ approach.

The other preferred sources for most respondents were in print format such as study guides, journals, reference sources. Newspapers, television and radio were not popular sources. A study by Maenzanise (2002) confirmed this situation when it was stated that being far removed from

universities, distance learners were left to fend for themselves and would most likely seek information from sources with which they were familiar (including their personal experiences, given that most of them are mature and working people); personal contacts and some distance learners even resorted to the use of telephone and e-mail correspondence as their sources of information. The use of government publications, online catalogues and databases, subject/reference librarians, interlibrary loans while useful were the least preferred resources. This could be attributed to lack of awareness by the users of these facilities. The least preferred source was microfiche/microfilm. The reason for this could be because these sources are deemed as obsolete, users are not aware of them or do not think they are useful. However one of the reasons given for use of outdated sources or formats is the challenge of library automation which libraries face in Kenya among other developing counties. As stated by Wawire and Omboi (2010), one of the major challenges faced in automating and establishing digitalized library projects in African libraries has been the readiness of the university libraries in terms of skills and knowledge to implement digital and electronic library services. Furthermore, the same study noted that skills in e-resources management, e-services development, full-text digitization and teaching skills are lacking in African university libraries.

6.5.6 Importance of information sources

Rating of the importance of information sources was the other concern used to measure information sources sought by distance learners. The information sources and the order of importance in the perception of the respondents was shown in Table 5.5. The results show that module and study guides (54.6%) were the most importance sources of information, followed by the internet (46.1%), lecturers (42.1%), the library (28.4%) and books (28.4%). Friends and colleagues (24.8%), tutors (15.6%) and WebCT (11.3%) were among the lowest ranked information sources according to the distance learners.

As has been stated by several studies including Kavulya (2004) and Anyona (2009), the initial stages of distance learning was ideally through correspondence courses and a few contact hours when lecturers visited the regional centers. Study guides and modules were therefore the modus operandi then (and even now to some extent), supplemented by self-instructional audio-visual materials. In recent times however, these seem to be replaced by the internet where possible as

ICTs are used to facilitate the mode of delivery in distance learning programmes globally. However, the distance learners surveyed preferring the internet as an important information source ranked second. This is presumably because of lack of access by most distance learners to the normal library services resources due to their study circumstances and environment; also due to lack of searching skills as was found in Majyambere's (2014) study.

Lecturers were ranked third in importance as an information source although academically they are very helpful in terms of imparting knowledge, and traditionally they have been the most important information source in universities. Lecturers are important in terms of imparting knowledge but ranked lower compared to modules and study guides. This could be attributed to the less contact hours that distance learners have with the teaching fraternity. Library and books follow closely in ranking but lower than guides and the internet. This is not surprising given that various studies and literature reviewed such as Kavulya (2004), Wasike and Munene(2012) and Gudo, Ollel and Oanda (2011) among others, have observed that the provision of library services to distance learners and remote users is inadequate and a lot needs to be done to bring them up-to-date and to the required standard. As it emerged during interviews with library staff in Chapter Five, section 5.9.16/28, there was little or no adequate pre-planning collaboration for distance learners between the course planners (the academics) and librarians. It is therefore fundamental to enlist not only the support but also the involvement of librarians from the initial stages of the planning of all distance learning programmes. During the interviews with library staff mentioned that there was only "some modicum of involvement through meetings but it was not enough to have an impact on *a real plan* for distance learners because it involved planning for all students anyway". Some library staff commented that they were involved as an afterthought, that caught them "off guard" and that campuses "opened without the input of librarians end up without libraries for some time."

Following closely in importance as a source of information according to the distance learners, were friends and colleagues. According to Maenzanise (2002), distance learners study away from universities and any other institutions of higher learning. For this reason they usually fend for themselves and would therefore most likely turn to people with whom they are familiar with or colleagues who have similar experiences to theirs for solutions to their information needs. The

least ranked sources of information were the tutors and WebCT (online learning system). This could be interpreted to mean that the student needs were satisfied through the study guides, which would offer similar services as the WebCT. This reveals that printed study guides were favoured over the study materials available online in WebCT. This may be as a result of lack of ICT infrastructure. In terms of the tutors the students' needs were mostly met through the rare contacts with the lecturers. They either did not require the services of tutors or tutors were not available regularly, given the distance learners' study circumstances.

6.5.7 Information needs for assignments, tests or examinations

Distance learners' information needs are essential and a prerequisite in order for them to do well in their assignments, and for passing their tests and examinations. Table 5.6 showed the results where distance learners looked for information to meet their information needs for assignments, tests and examinations. It emerged that a majority of 71.6% of the distance learners still visited or travelled to the library for information, on their assignments, tests and examinations. This was followed by those who bought their own materials at (46.8%) while 44.7% relied on electronic or online sources. Those who used or collaborated with other libraries accounted for 19.1%, followed closely by those who received information through the university supply or thorough the post at (18.4%).

The choice of visiting the library as the first option shows that distance learners still believe that the library would be better placed to satisfy their information needs for their assignments, tests or examinations. More often than not however the library is used as a study space. The least ranked important source was the university supply or through the post. This is not surprising given that not many people use the post office or 'snail mail' with the advent of ICTs. The purchase of their own materials by distance learners could be attributed to their purchasing power because among the many characteristic offered by Agalo (2008) in her study, online and distance learners, are mostly part of the working population. Therefore they are occasionally able to purchase materials that may not be available in the library.

In terms of asking for help from knowledgeable people, this is also a characteristic of distance learners and knowledgeable people according to a study by Maenzanise (2002). Knowledgeable

people are those who have characteristics similar to the distance learner who would ideally be colleagues at work or students attending distance learning programmes or doing similar courses, programmes and modules. In the same study, it was observed that it is not unusual however for distance learners to resort to other personal means of obtaining information because they are far removed from the university. They can also look for information from family members as well as newspapers, television and radio, among other sources.

6.6 Information resources and services for distance learners

Information resources involve the totality of all the materials available to facilitate information services delivery to users in need of such services. In the context of this study, information resources involved the availability of both print and electronic resources in the surveyed university libraries. These included the audio-visual resources that assisted in fulfilling distance learners' needs of information for their studies. The available information resources in the surveyed university libraries have an impact not only in the delivery of information services to distance learners but also to the learners' academic achievements.

6.6.1 Library information services and learners information needs

This section discusses the results of the adequacy of library and information services for distance learners' information needs. Libraries are essentially considered as providers of information as well as sources of information. However, as Majyambere (2012) noted, students are motivated to visit libraries for different reasons, although they do consult both print and electronic resources available in the academic libraries to meet their academic information needs. The results showed that a majority of 84.4% used the library to meet their information needs, while 15.6% did not use the library.

Although the general consensus was that the majority of distance learners used the library; this could be interpreted to mean that they may have visited and consulted the library resources however, their information needs may not have been met. This could be due to a number of factors. The main reason among many is that the resources in stock do not satisfy their information needs. During the interviews with library staff, it emerged that user surveys; to assess the existing library support for distance learners were not regularly conducted or not at all.

A library staff member commented that; “In this academic institution it is *assumed* that the needs are defined by the curriculum and the course outline”. Another library staff member added that, “The library management team has not come up with the method of evaluating the needs and again it is *assumed* that the student knows and understands the library” A study by Wasike and Munene (2012) confirmed that university libraries in Kenya have not achieved much in carrying out user studies on non-traditional students to establish their characteristics, information seeking behaviour, what information resources and formats they prefer and challenges they encounter when seeking information. This has led to the libraries’ information resources and services not meeting the information needs and information-seeking behaviour of these type of students.

A minority of the respondents did not use the library to meet their information needs due to their study circumstances in terms of distance and the lack of appropriate library services and resources. A study by Oladukun and Aina (2009) indicated that although distance learners could claim books were their most important source of information, the main challenge was whether they indeed had access to the correct and appropriate books. Ostensibly this could result into ‘nonuse’ of books and any other university materials for that matter given their redundancy and diminishing visits to the library due to the resulting frustrations for distance learners.

6.6.2 Meeting learners’ information needs

The results of the students’ perception of the adequacy of the library and information services showed that more than half the distance learners (53.2%) considered the library and information services provided by their institution as being inadequate, while 44.7% of the respondents stated that the services were adequate. This situation is not unusual for a service delivery that is not meeting its obligations. The library as a service provider is required to supply a quality service which can satisfy its users in order for them to return to use the service. Wasike and Munene (2012) has observed that this concept of a quality service can be described as a contract between a library and its users which is based on the agreement between standards and service delivery. Although there are many such agreements recorded as charters prominently displayed in strategic corners of most universities in Kenya, in actual fact they are routinely ignored. It is also debatable whether a discontented user can actually seek redress through such charters because these are not binding and in any case most users and stakeholders are probably not aware of such

charters or how they can benefit from them. In any case, such agreements or charters should ensure that the information users actually get value for money in terms of the product, time spent, effort involved and the desired result. This is what determines a quality library service, among other elements.

It is worth noting, but also alarming, that some distance learners have gone ahead with their studies and will actually finish their studies without using the library. Indeed a study by Nwezeh (2010) observed that sometimes a student could even graduate without using the library. This only confirms the notion that the way the services are offered are not sufficient enough to make a user highly dependable on them in order for them not to ignore the library service. The library is a key department service in any university. In an ideal situation, the library endeavours to excel in the provision and timely access to relevant information and knowledge to meet the learning, research and teaching needs of the university community and beyond. The university community depends on the library for learning and research purposes. The library is where all the information (both current and historic) is stored. The immense and rich information sources held by the library are therefore indispensable. To imply that a student could go through their programme and actually graduate without using the library is akin to saying one could successfully carry out an experiment without ever visiting the laboratory in a scientific scenario. This is especially so because, as Wasike and Munene (2012) stated, students usually seek information mainly to do assignments, write term papers, prepare for examinations and carry out research.

Therefore 44.7% of the distance learners claimed that the library services they received were adequate. Although this is a positive revelation, it still does not confirm that the services offered were adequately tailored to meet their information needs. This could be attributed to the learners' searching skills, user education or information literacy which could assist them to find the information which they needed because they knew where to locate information in the library, where to search and find information, or enlisted the support of library staff. In such instances it has been shown that students had library-use skills than previously assumed even if such skills were limited. A study by Chikono (2000:32) noted that students vary in their experiences of using higher education libraries or academic libraries. Some have no prior experience of library

use and some have poorly developed skills which could be interpreted to mean that at least there are some who have skills to undertake a successful search and actually find what they need. This state of affairs essentially should prompt academic librarians to make user education very robust, appealing and perhaps a compulsory taught module.

6.6.3 Library and information support services

Due to the uniqueness and conditions of distance learners, it is inevitable that they would require maximum support perhaps more than the traditional students from their universities. The kind of support students received from the library and other support services is shown in Table 5.7. It emerged that less than half (45.4%) of the distance learners personally travelled to the university library to get support while, 19.9% used online or electronic sources to support their studies. However 16.3% bought their own materials while 11.3% received support through the post and asking for help from knowledgeable people respectively. Receiving support from collaborating libraries and information centers was an option for 7.8% of the distance learners. Wasike and Munene (2012) observed that librarians are duty bound to assess the existing library support services for non-traditional learners' modes of learning, availability, appropriateness and effectiveness. The support for distance learners therefore is crucial for the success of their studies. This includes preparation for their assignments and passing their examinations, and the first place they look for this support is the university library. As already confirmed in Chapter Five, sections 5.4.4 and 5.5.1, the distance learners' first choice in looking for information is in the library. It is however, never that simple due to the fact that they are far removed from the universities. Regretfully, after overcoming all the existing barriers and travelling to visit the library, distance learners are then faced with the sad state of the inadequacy of the libraries information resources. It is therefore not unusual that a distance learner faced with this type of a situation to fall back to the second or even third available option as revealed by respondents in Table 5.7. This option is to seek information through online or electronic supply support or to buy their own books, even though this is an expensive option given the ever escalating prices especially of imported books.

Recent developments in ICTs in terms of access, storage, transmission and reproduction has changed the way in which people seek information. This is no different for distance learners.

Faced with various challenges, they fall back on ICTs for their information needs. As Wawire and Omboi (2010) observed, the only way to satisfy user demand is to use ICT in information and service delivery. As mentioned in the introduction, Chapter One, section 1.2.1, a distance learner is usually a working professional ostensibly with ICT infrastructure at their places of work which is readily available for their use. During the interviews with the library staff, it also emerged that the most appropriate methods to support distance learners was through e-resources. While it is generally agreed that there is poor or erratic ICT infrastructure in most academic libraries in Kenya library staff intimated that the modest available infrastructure is best used for updating and subscribing to current and relevant full-text databases, remote access to the library websites, e-mails and generally providing e-information or resources to distance learners as opposed to regular visits to physical libraries.

On the other hand, getting direct supply or delivery direct from the libraries is a costly undertaking for any library because it operates in an environment of ever tightened financial constraints (Wawire and Omboi, 2010) due to the perennial scarcity of funds. This scenario, as Table 5.7 reveals, has led distance learners to opt for support from knowledgeable people or people whom they know. Collaborating with other libraries and information centers is usually done through interlibrary loans. However, with little or no proper orientation, most students (Majyambere 2014) including distance learners either were not aware of or familiar with the availability of such services.

6.6.4 Other libraries used

Given the known circumstances of distance learners, they are likely to seek other sources in seeking support for their information needs. Being far removed from the universities, they may turn to other main campus libraries (on arrangement), public libraries or any other source. When asked which other libraries they used to access information and any other support services, distance learners gave an equal response for the use of both other main campus library and the public library (53.9%) respectively while their own campus library was the least accessed by 7.8% of the students. Some of the literature reviewed confirms that when the information needs of distance learners are not met by their main campus library, they tend to turn to the public library even though in most circumstances it may not be as well-equipped as a university or an

academic library. A study by Nwezeh (2010:111) showed that after the university's main library, another university and departmental library is used and the next in the hierarchy, is the national or the public library. This can be interpreted to mean that having exhausted the library support services available for the distance learner within the universities' hierarchy, the next in importance would be the public library.

6.6.5 Membership arrangements

As mentioned during the introduction of this study in Chapter One, section 1.3, in the developed world the library professional associations such as American Library Association (ALA), Canadian Library Association (CLA) and Association of College and Research Libraries Association (ACRL), have offered guidelines and benchmarks to institutions planning to offer distance learning programmes. The ACRL for instance has indicated that library and information services must be provided to meet the needs of distance learners on an equitable basis with their on-campus colleagues (ACRL 2004). In view of the foregoing, the distance learner therefore must be given every support available not only for the success of their academic undertaking but also the support must be equal to that given to the traditional or on campus student. Distance learners as users of library facilities and services should be accorded an exemplary service because in any case such students are important within the university community.

Table 5.8 shows that distance learners were not aware of their own rights even after paying for them, perhaps through no mistake of their own. The institution arranged for membership of the library for 38.3% while 36.2% stated that they arranged their own membership. Only 21.3% were aware that their membership was automatic. In Kenya (this could also be the trend in most universities), there is always a library charge paid on registration. Therefore this could be interpreted to mean that while almost all universities include library fees from the outset to be paid during registration, the only reason why distance learners were not aware of this could be that distance learners were not informed that once university fees are paid, this includes library charges or fees. They then automatically become members of the library with equal rights to access to all facilities and resources as those for the traditional or full-time students. The 38.3% who thought the institution arranged such access for them may be under the false impression that it is the institution while in fact they had paid for membership through their own fee payment.

Those who thought that they had arranged their own payment, 36.2%, were correct although it is debatable whether they were aware it was through the library membership charges which they paid. Only a small portion were aware that they then were automatically members of all library and information services and equally entitled to all the support and services which full-time students received.

Since the distance learners were not aware that they paid for and were entitled to the library service, one can assume that this lack of awareness affected their ability to satisfy their information needs. During the interviews with library staff, while commenting on any possibility of regular evaluation of needs of users it emerged that, “it is assumed that the needs of distance learners are defined by the curriculum and course outline” or “that the library management team has not come up with the method of evaluating the needs and again it is assumed that the student knows and understands the library” With so many assumptions without any regular needs evaluation for distance learners, it is clear that the support and services offered may not be tailored to suit their needs.

6.6.6 Payment of services

The distance learners also pay for library and information services. Table 5.12 show that the majority of the students (60.3%) were aware that this service is paid for by themselves. Those who claimed that they did not pay (38.3%), were probably not aware that the costs were charged anyway and are paid on registration as stated in Chapter Five, section 5.5.6. The issue of payment for library services is important to libraries in universities. Libraries rely on funding from the government through their universities but with the ever diminishing financial resources libraries have been strongly advised to begin income generating activities. The most obvious kind of activities traditionally for libraries have been membership fees, fines, recovery of losses and charges for use by non-members or what is alluded to by some librarians as ‘external users’. Funds from these activities however are minimal and do not make an impact in terms of library resources. However both the Commission for Universities’ Standards and Guidelines for University Libraries (previous 2012 and current 2014) require that a university shall provide adequate resources to support open, distance and e-learning library services (CUE 2014:106). Therefore all students should be provided with library and information services which they pay

for. Therefore while a majority of distance learners are aware that that they already paid for library services, it is dependent upon the CUE and the universities to ensure that their unique needs are addressed. This responsibility falls directly upon the university management and the librarians to follow-up and ensure that it is implemented.

6.6.7 Access to the library website

Anyona (2009) critiqued the promise of ICTs in the delivery of distance learning education. He stated that one of the most apparent trends affecting distance education as IT became ubiquitous in peoples' daily lives was that more people relied on it in their day-to-day activities for delivery of services. Kenya is no exception. In this regard, the Commission for University Education (2014:99) in its standards has also given guidelines through LIBR/STD/03 on the necessity of ICTs in information management. There is a particular emphasis which encourages e-learning as some of the delivery methods in distance learning. The access to the university library website therefore has ideally become synonymous with learning, not only for distance learners but for all learners and stakeholders. It is through the website that news, new programmes notices and any new developments among other things are posted, but more important it is also through the web that users can have access to the library and hence library resources. A study by Wasike and Munene (2012) affirmed that the www as a publicly available service on the internet has created an opportunity in the way students' access information. It has allowed non-traditional students to access and contribute to information stored across the world. With the increased use of devices such as mobile phones, the Web has become a very powerful tool in accessing information.

A majority (74.5%) of the distance learners stated that they had access to the website while 24.8% stated that they did not have access to their libraries' websites. However, studies have shown that even when students have had access, there is no guarantee that their information and support needs are adequately met. Wasike and Munene (2012) observed that such access was only possible when users had access to devices that enabled them to use the web; relevant information to meet their needs is uploaded to the servers with access to the internet and search engines enable users to find the relevant information. However at the same time, Wawire and Omboi (2010) observed that one of the main challenges facing African university libraries (apart from funding) was ICT infrastructure, internet connectivity and lack of commitment from staff.

Indeed during discussions with library staff it was revealed that they faced a plethora of challenges ranging from limited online access due to a few or lack of subscribed databases, lack of internet access, lack of staff trained in IT, lack of power supply, fewer passwords and lack of high capacity servers. The list of challenges is long but the bottom line is that staff will not be motivated to give of their best in this kind of working environment. The result of this is that access and maintenance of the library websites as well as the usefulness of the information thereof remains a challenge.

6.6.8 Frequency of use of library website

Following the challenges associated with access to the website, the results of Table 5.9 show that more than half (70.5%) of the distance learners used the website regularly compared to the 6.7% who used the website only once in a week. The website was used twice per month by 3.8% of the students. The students who used it only once per month were 6.7%, the same as those who used it once in three months who also were 6.7% respectively. Only 2.1% admitted that they never use the library website.

The regular use of the library website could determine whether the users are benefitting from having access. However, merely accessing may not conclusively show that users are indeed benefitting from the services of the information uploaded. On the other hand, accessing the website only once in a month could mean poor internet connectivity, lack of power supply or outages as confirmed by some of the library staff during the interviews. The other possible reason is that after overcoming all the barriers and several attempts of accessing, the website, in the end users did not find the information which they require or which could satisfy their needs adequately. While some studies, such as Anyona (2009) among others, confirm that ICTs hold the promise or could be the solution in the delivery of distance learning programmes, a negligible number of 2.1% of the distance learners never use the library website. These distance learners perhaps require more input from the library staff in terms of their user education as well as ICT user skills.

6.6.9 Contact with subject or reference librarian

The current practice in Kenya and most developing countries is to treat all library users in the same manner. In the absence of distance learning librarians, subject/reference librarians usually attend to all users including distance learners. Table 5.10 shows that 78.7% of distance learners visited or contacted the subject/reference librarian, while 17% did not contact the subject librarian at all. Contact through e-mail was undertaken by 15.6% and 1.4% sent messages through the short messaging systems (SMSs) to the subject librarians. A negligible number posted letters, left messages on answering machines or used a dedicated free telephone number; these last two options being rare occurrences in Kenya and presumably in most developing countries.

The majority of distance learning students who visited the library illustrate that the subject librarian or the distance learning librarian would be a very key person (if in place). This may be a very strong case for the position of the distance learning librarian to become one of the core members of staff in the university libraries that offer open and distance learning programmes. This has long been established in the developed world. In the developed world, some effort has been directed towards engaging the services of full-time distance learning librarians. It was already recognized in the USA and UK by the 1990s that distance learning librarians were necessary for the unique needs of distance learners. Unwin and Bolton (1998:108) stated that while a majority of libraries did not have a specialist distant learning librarian a number of universities were aware that this was a full-time responsibility. Some universities had already engaged the services of distance learning librarians on a full-time basis. In Kenya the previous 2012 and current 2014 Standards and Guidelines for University Libraries have recognized the place of the distance learner in the provision of library services. However the place of the distance learning librarian is not explicitly stated nor is it shown either in the Fourth Schedule which deals with Standards and Guidelines for open, distance and e-learning; or the Fifth Schedule which deals with Standards and Guidelines for University Libraries in Kenya.

It is remarkable that 17% of the distance learners did not contact the subject librarian at all. This could be because they were not aware that such a member of staff existed in the libraries to support their information needs. The other methods that were used by distance learning students

to contact subject librarians such as e-mails and the SMSs may not be popular methods because students may not be aware of these methods. As for the dedicated free telephone number in order to contact librarians, it is a very rare service in Kenya and most developing countries; given the perennial shortage of funds and lack of proper ICT infrastructure, including dedicated telephone landlines.

6.6.10 Information literacy skills

One of the key elements to users making full use of the library resources is equipping users with proper user skills in order to enable them to exploit fully the resources available. There are various ways of doing this which and over the years have been conducted through various activities for new students. These include (for example) short informal talks and tours of the library with a welcoming word or pep talk from the deputy university librarian or subject/reference librarians. Later on as a matter of procedure, there will be more organized official tours, hands-on experiences and prescribed lectures for these students in terms of user education which in some universities is also known as information literacy. Unfortunately these routines have been primarily intended for full-time students. Full-time students report on a specific date so these arrangements are made for them. Distance learners are supposed to fit themselves into the programme. However, distance learners report as and when they are accepted (anytime in the academic year) and although they are supposed to report as a group, this is not always the same given their circumstances (Chapter Five, section 5.5.10).

From the results, it emerged that more than half (55.3%) of the distance learners claimed not to have been provided with any information literacy skills compared to the 44% who claimed to have been provided with information literacy skills. This is in keeping with a study by Kavulya (2004) which advised that there is a need for initiating delivery of services and programmes of library user instruction designed to instill independent and effective information literacy skills. While such programmes have ostensibly being delivered to newly arrived students as a matter of routine, the current scenario requires that such programmes be designed with distance learners in mind. User education is the key to the exploitation of library resources by all students in order for them to perform well in their assignments and examination. This is a crucial component of

their learning process and should be given the optimum attention it deserves rather than being treated as a matter of procedure.

During discussions with library staff, it also emerged that there was need for follow up lectures (Chapter Five, section 5.7.7) in lecture halls on user education, regular seminars and making orientation or user education a compulsory activity rather than an option for distance learners, as is the current practice. Moreover with the arrival of new technology, providing information literacy skills to distance learners requires new methods of delivery such as video shows, video conferencing, and various types of interactive web-based tools such as cellphones among others to keep pace with the rapid advances of technology, and to rouse interest and even motivation to attend these sessions. Another point was raised during interviews with the library staff, in that new training of both library users and library staff members was also emphasized. Chapter Five, section 5.9.9, reported the need for regular training of both staff and students. In Chapter Five, section 5.9.13, library staff members also stated that some members of staff were apparently employed without the requisite professional qualifications. These staff therefore required training in various activities of the library, especially IT and distance learning specializations. In addition, one of the most important aspects of training would also be on information literacy for all library users. A separate plan for distance learners is however, required. The crux of the matter however is that academic libraries and library staff need to emphasize their own training with support from university management as well as training of users. There is also need for librarians to embrace the changing needs of users and take a proactive role in advising the university management, rather than the other way round. There is also need for library staff to plan well in advance. More importantly failing to put these measures in place and evaluating the training regularly is likely to result in the information needs of distance learners not being met or satisfied.

6.6.11 Information literacy training method

The training method adopted by libraries is always important in imparting information literacy skills to users as required to satisfy their information needs. It was therefore important to discuss the methods of training of students in the advent of the current ICT developments. Table 5.11 shows that face-to-face teaching during orientation was the most popular method according to

36.2% distance learners followed by tutorials during residential sessions for 12.1% of the distance learners, while e-learning was used as a method for only 10.6%. This confirms that while ICT are being touted as the best solution in delivery of teaching programmes, it is still not used extensively in the delivery of user education packages for distance learners. ICTs has its challenges in terms of affordability and infrastructure, however, where possible it should be used to overcome the challenges of distance learners.

6.6.12 Information resources/services available

One of the main reasons for undertaking this study was to interrogate the availability of library and information services for distance learners. The type and range of services that distance learners could use would appear to depend on what material is in stock or purposefully sourced for all users of the university mainly without the input from distance learners as already mentioned in (section 6.6.1) as all library users are treated the same in terms of delivery of library services. Without institutional policies to guide the provision of services for distance learners, inadequate funding results in poor facilities and resources. The information services available would therefore be the usual traditional ones expected to be found in any academic library in most universities in the developing world (Kavulya, 2004:23). These include mainly books, journals, photocopying facilities, the internet, reference services and government publications, among others. In satisfying the information needs of distance learners, the focus of the RBL model used for this study requires an infrastructure that combines both print, non-print and HR resources not only to compliment but also to improve the learning processes of students. The RBL model thus requires that librarians should always be aware of the main objective of the library services, namely to avail the services, enhance access and offer relevant user skills for location, retrieval and use of the information resources by their users.

The results in Table 5.12 showed that from the listed services and resources a majority of the distance learners (78.7%) indicated that journals were available to them, followed by newspapers (72.3%), and the internet (66.7%). Photocopying services, reference sources and books were available to 52.5%, 51.8% and 51.1% of the distance learners respectively. The choice of journals over books could be attributed to the advice from lecturers, who are known to advise learners especially at a postgraduate level to use journals as opposed to books thus raising

awareness of journals and making them more popular as a resource. Such advice is encouraged because the journals are deemed to contain the latest information on a subject. However given the meager and always declining financial resources allocated to libraries, the purchase power of these resources is gradually diminishing given the constant increases in journals subscription prices. Distance learners stated that government publications were available to them (29.1%). This is not surprising as most distance learners would be in the working class category that use or are more conversant with government publications which they come across during the discharge of their duties. The survey results also revealed that online databases, subject/reference librarians and online catalogues were not the most available resources. ICT infrastructure comes into play again in terms of efficiency and affordability and this can be expected although it is mostly unavailable or scarce as a service or resource. On the other hand the subject/reference librarian as a service for distance learners is probably a misnomer because what is really required are the services or the position of a distance learning librarian for distance learners as only 22% of the students indicated that librarians were available to assist them with their information needs.

6.6.13 Usefulness of the available information resources/services

Having determined the information services available, the survey sought to establish which services were most useful for the respondents. Wilson's (1996) model and the later versions became more influential because they incorporated or borrowed from other information-seeking models of behaviour. Wilson's (1996) model focused on how people seek and make use of information as well as the channels (Mnubi-Mchombu 2013). Moreover it has been pointed out in this model that a user (being the focus of an information need) is likely to conduct ongoing searches, process and use the information to their satisfaction. Although the process may be stressful, they may repeat it in order to achieve their desired goal. Table 5.13 shows that books were regarded as the most useful by a majority of 88.7% of the distance learners. However as Oladukun and Aina (2009) observed, it is debatable whether these books were appropriate and relevant for their information need. The next useful service according to the respondents were journals and the internet respectively for 80.9% of the distance learners, followed by reference sources for 68.8% and newspapers for 64.5% of the distance learners. Online databases were useful for 55.3% while online catalogues and photocopying machines were considered less

useful. The results further established that useful services were the subject/reference librarians for 51.1%, of the distance learners, and government publications and interlibrary loans were useful for 48.9% and 38.3% of the learners respectively.

It is not surprising that books and journals were considered the most useful to distance learners because in terms of their circumstances and experiences these were the sources that they would have used before. Hence they would be aware of such resources as they could get them either from any library or through a purchase. However, as has been observed elsewhere (Chapter Five, section 5.5.13); subscriptions for journals are not regular so the therefore the usefulness may be inadequate. The internet is also easily accessible given that the most distance learners have these facilities at their places of work. The hindrance would be the accessibility to the university or library website due to poor ICT infrastructure, and further the available e-resources when and if they finally did have access to the website since their needs may not be sufficiently met in such cases. Remote access for online databases and catalogues has a plethora of challenges. This is usually never a helpful service for distance learners given the challenges of lack of hardware and access to the internet. Hard copy reference services are easily available in most libraries that have not invested much in ICT or online resources, but more often than not they are not updated. In addition, many distance learners would not have access to such reference collections on the main campus given their distance from the campus and the limited opening hours of the main campus libraries.

6.6.14 Awareness of library and information services offered to distance learners

Over the years, libraries have been provided their users with current awareness services (CAS) in terms of accession lists, indexing and abstracting. It is not unusual to also find resources displayed in prominent places usually at the main entrance of the main library door highlighting topical subjects. This is intended to keep library users abreast of new information resources and to bring to their attention as and when new information is published or to create awareness of certain sources of information. Used interchangeably with selective dissemination of information (SDI) in an academic library, CAS can guide users to specific information which they require for their learning needs and academic progress. It emerged that a majority of 80.1% were not aware of the services that their library offered while, 19.1% claimed to be aware. The results reveal that

a majority of the distance learners were not aware of the library services that were available for them. This is not surprising given the circumstances of distance learners.

Library services should be marketed and brought to the attention of the users regularly. This requires information to be posted on the library website or possibly circulated through e-mail or a listserv if available. This would be possible only if there is excellent ICT infrastructure and regular power supply. Such a situation is not common in most developing countries, including Kenya. Prominent displays at the main entrances of the main libraries do not help because in order to benefit from these a user is required to visit the library regularly. This is a condition that is only favourable to full-time students' on campus. One of the fundamental principles of the RBL model used for this study is to engage students, teachers and librarians in a collaborative learning process. It is however the librarians responsibility to select, acquire and disseminate learning resources in order for learners to make effective use of them. It is therefore incumbent upon the librarians to develop effective current awareness services that will not discriminate against distance learners.

6.6.15 Services used in the past year

The use of services and information sources in the recent past can give an indication of their usefulness and significance. Table 5.14 revealed that the following the library and information resources were used by a majority were books by 80.9% of the distance learners followed by journals used by 61%, the internet by 54.4%and newspapers used by 50.4%. Typically photocopying was also a popular source used by 48.2%, followed by reference sources used by 26.2% and government publications used by 22%. Surprisingly, e-resources which would normally be the most preferred services for distance learners such as online databases and online catalogues necessary for the subsequent searches were only used by 12.8% respectively. As noted earlier in terms of the ICT challenges, this was an expected outcome. The subject reference/librarian and interlibrary loans had not been used by students in the previous year.

The regular use and importance of a service depends on many issues. If the service is available as and when required as well as being of significance, it motivates users to use the service regularly. Books and journals are the backbone of any library and this is no exception for academic

libraries in Kenya. Due to perennial shortage of funds however, some institutions can and do resort to unusual steps to acquire and satisfy the ever increasing need for essential resources for distance learners. The University of Nairobi for instance used part of the fees paid for the course to buy essential books and distributed them to students but this approach proved to be expensive and was discontinued (Kavulya 2004). Currently students are required to borrow books from university libraries, public libraries and any other non-governmental institutions' libraries. In the event that they are not able to use these services or have access to them, individuals are required to purchase their own materials from booksellers. While printed materials (in terms of books and journals) were the most popular services and sources preferred by the distance learners, they are not readily available to the distance learners, in an environment that has financial constraints (Wawire and Omboi,2010). The fact that e-resources were not that heavily used could be as a result of poor ICT infrastructure in terms of connectivity, irregular power supply and power outages as confirmed by some of the library staff (Chapter Five, section 5.9.12). With regard to the services used in the year prior to this study the subject/reference librarians (who were assumed to handle distance information needs) were not used by many of the distance learners. This can be attributed to the remoteness of the distance learners and the lack of available dedicated distance librarians in the remote satellite centers to serve the distance learners' information needs.

6.6.16 Adequacy of information needs

Having established the usefulness of the library services and resources and awareness of the resources used in the recent past, it was important to establish whether distance learners needs were adequately met by the services and resources available. The results in Table 5.15 show that a majority of 69.5% reported that only some of their information needs were met. This was followed by 21.3% who stated that most of their information needs were met. Only a few of the distance learners (6.4%) reported that all their information needs were met. This would suggest that not enough is being done to satisfy the information needs of the distance learners. Wasike and Munene (2012) confirms that there is a modicum of concern but from the study by Kavulya (2004) it is evident that although a lot of effort has been made to satisfy the information needs of distance learners, this has been hampered by several factors and a lot more needs to be done.

While the availability of large collections in magnificent large buildings creates a supposedly conducive academic environment, this may not be the case in the context of distance learning. It is also important to make a distinction between the services, their significance and frequency of use, and the satisfaction of distance learners' needs. Reviewed literature confirmed that the availability of the resources in stock does not necessarily mean that the stock is relevant for all users or indeed satisfies the information needs of the users. Wasike and Munene (2012) observed that librarians are duty bound to assess the existing library support services for non-traditional students in order to determine not only availability but especially adequacy in satisfying users' needs. Regular surveys of distance learners' usage and adequacy of the information needs is important to establish the appropriateness and adequacy of the needs of the distance learning users. In addition, the librarians need to be involved in the inception and planning of the provision of library and information services. Without this user surveys will be rendered redundant if they are planned for the traditional full-time student, as several studies have confirmed. Unfortunately, according to Wasike and Munene (2012) university libraries in Kenya have not achieved much in carrying out user survey studies to establish preferences, usefulness and adequacy; among other characteristics of distance learners. Therefore while a majority of the distance learners stated that some of their information needs are met, it is evident that with carefully planned user surveys and forward planning, it would be possible to meet the information needs of most distance learners.

6.6.17 Problems accessing library resources

Due to the circumstances of distance learners, one of the fundamental problems, with which they are faced, is that of accessing the library and information services resources. While libraries put a lot of effort, in terms of acquiring the satisfactory and appropriate resources, users require that they are able to access and use such resources. Many problems in accessing the library resources were reported by distance learners. The problems ranged from lack of time to visit the library, lack of search skills to lack of ability to use the OPAC. It emerged from Table 5.16 that the main problem of accessing library resources was time to visit the library as experienced by 39% of the students. Given the environmental study conditions, this is not surprising. This was followed by 26.2% of the students who had problems with accessing outdated books, and distance to the library was a problem for 16.3% of the students.

Some of the other problems reported associated with accessing the resources were purely administrative such as the lack of space or seats (10.6%); but others require re-thinking by librarians such as the lack of information search skills (9.9%) and for those who were internet compliant lack of internet access or poor internet coverage (7.1%). Lack of understanding of the classification system and poor relationships between staff and students were also reported by 5.7% of the students. Other problems reported included closure of libraries during weekends experienced by 2.8% and limited opening hours by 1.4%. Power blackouts, few libraries and locality of libraries were also reported by a few students.

During the literature review, it emerged that merely having standards and guidelines for organizations is not an end in itself. The ACRL for instance in the USA has the responsibility of maintaining a close check and ensuring that standards are regularly revised and approved by the Board of Directors (ALA, 2014). The crux of the matter in regard to the provision of library and information services to distance learners is that these standards and guidelines are founded upon the philosophy of the Bill of Rights for the distance learning community. In tandem with this entitlement principle, the standards are also founded upon the basic moral precepts such as access for academic achievement, direct access for distance learners, mandatory monetary support by the parent institution, ICT infrastructure and working computer facilities for technical linkages and user education support and information literacy for all. The *all* here implies support for people with disabilities as well. The keyword here is *mandatory* which does not leave room for librarians to circumvent the rights to access to the resources for certain categories, in this case distance learners. These standards make it very clear that the resources are for every student, staff member, administrator, and any other member associated with the institution regardless of distance or location. Academic libraries must also meet the information and research needs of their communities equally for all individuals on the main campus, off campus, regional or satellite campuses and indeed everywhere, regardless of the absence of a physical campus, public or private university.

In terms of funding, CUE (through standard LIBR/STD/09) clearly states that universities shall provide at least 10% of their total institutional operational budget annually for the acquisition of information resources excluding personal emoluments and capital development. The reality on

the ground however, is that most universities in developing countries rely on donated materials which sometimes are obsolete because they were not selected according to the information needs of library users. The most glaring omission however, is that the standards and guidelines are routinely ignored by university management. This is confirmed by Wawire and Omboi (2010:150) who stated that “this standard is yet to be observed by many universities in Kenya”. In terms of funds allocation and the rule that requires universities to spend at least 10% of their budgets for acquisition of library resources, Wawire and Omboi (2010:151) stated that “most universities are yet to adhere to this rule and regulation.” As can be deduced from the above, the Kenyan Standards and Guideline for University Libraries may have to revisit the schedules that deal with open and distance learning programmes.

As stated in section 6.6.2 of this study, due to the independent study conditions of distance learners their unique needs seem to generate similar impediments in terms of satisfying their information needs. Most of the respondents reported similar challenges in accessing library resources. Time to visit and distance from universities and libraries appeared to be the most challenging aspects for the students who due to circumstances were away from the universities. Some of the other problems however, should be addressed by librarians, together with managers of their universities. Problems such as outdated text books, lack of space and seating, poor relationships between staff and students, lack of information literacy and limited opening hours are purely administrative. These matters should be addressed by library management to ensure that they provide an efficient and effective service to distance learners. In addition and more important, library staff also require the necessary skills to be able to process and organize all library resources professionally so that these can easily be located by users. Cataloguing and shelving (sometimes detested by most library staff as unprofessional, and mostly done by library assistants and clerks) is crucial in locating materials. Conducted haphazardly, a vital resource can be misplaced for long periods of time or lost forever, without being used at all. This often so called ‘unprofessional’ activity therefore needs to be done by professionals or at least strictly supervised by trained librarians. The students or library users need user education skills in order to be able to locate the library resources easily for their information needs. Wilson’s (1996) model used for this study and others used earlier stated that in an effort to locate information to

satisfy a need, a user is likely to meet barriers of different kinds. Training in user education skills is one of the solutions that can solve this challenge.

6.6.18 Solution to the problems of accessing library resources

After providing the respondents an opportunity to present the challenges which they faced in accessing library resources, it was also important to offer them an opportunity to suggest or recommend any possible solutions. Table 5.17 gives an indication of the solutions provided by distance learners in order to solve these problems. The results revealed that the first solution was for the library to purchase more books according to 26% of the students. In the absence of an adequate ICT infrastructure which can deliver on e-resources, users will fall back to books as their next option hence the suggestion to purchase more books. Reviewed literature including a study by Oladukun and Aina (2009:46) also reported that when distance learners were asked to indicate the most important information source, it was reported that 45% identified books as their most important source of information. The next most popular solution offered by distance learners in terms of accessing the resources was for the library to employ the latest technology networks to improve access. This is in keeping with current distance learners' use of online and electronic sources of information, despite the obvious ICT challenges.

Some of the learners (11.3%) suggested that the libraries should be opened over the weekend, users should be educated on how to access different information was suggested by 9.2%. These suggestions are administrative and the libraries should consider remaining open during the weekends and extending the hours on weekdays to accommodate distance learners. In terms of educating users on how to access different formats of information, this would require the librarians to improve on the accessibility and content of their user education programmes. Another vital solution offered by respondents was that of the development of good relationships between staff and students. The students should be treated equally, regardless of their status. Library staff must endeavour to create positive relationships with all students, particularly distance learners given the additional challenges which they face in satisfying their information needs.

Wawire and Omboi (2010) stated that library staff need not only be user friendly but also need to change their unyielding stance to the changing needs of users and do away with the resistance to change from the traditional librarian to the present user-centered librarian. This philosophy is also expounded by the RBL model. Wasike and Munene (2012) in his study also stated that the increased number of distance learners have resulted in a new category of users who are making different demands on university libraries. This increases the use of student-centered learning methods in university education which support the RBL model used for this study. Library staff are at the threshold of these new developments and therefore need to emphatically support the student-centered learning methods in university education and put more stress on coherent development of library and information services which also need to be student-centered. Proper user education programmes will also assist distance learners not to be excluded and provide opportunities to explore and make maximum use of all library physical facilities, resources and services. Other solutions offered by fewer distance learners, but which were very important included:

- Improve online services (4.3%);
- Establish libraries in remote areas (3.5%);
- Proper shelving of resources (2.8%);
- Improve on space and seating (2.8%); and
- All extra mural centers should have well-equipped libraries (1.4%).

Other solutions offered by the students were equally important. These included obtaining backup generators; having a distance learning librarian; using interlibrary loan facilities; employing more staff to assist students with the use of electronic information; and channeling all the information through the university website. Although some of these solutions were mentioned by a few students; they are nonetheless very pertinent to the non-traditional student environment. The improvement of online services with proper ICT infrastructure in place would reduce the regular visits to the library at such long distances. The establishment of libraries in remote areas would be important in creating conducive study atmospheres for students in those areas. Proper shelving of resources is a very valid solution because resources that are mis-shelved are lost to users. Improving on space and seating capacity is an administrative matter which librarians can monitor and sort out as and when the situation requires. As already reported elsewhere in section

6.6.17, any extra mural center or distance learning centre should not be authorized to implement distance learning courses if they have not adhered to mandatory Standards and Guidelines overseen by the Commission for University Education (CUE). The purchase and installation of backup generators should also be a mandatory prerequisite as is the position of the distance librarian which is crucial in catering for the unique information needs of distance learners. The use of interlibrary loan facilities, needless to say where available, is helpful. The employment of more staff, specifically to assist students in an electronic information environment, is important, as would be channeling all the information through the university website as it relates to offering e-resources to meet the distance learners' needs.

Some of these solutions offered by distance learners appear to concur with some of the views offered by those members of staff who were interviewed. During discussions with librarians as presented in Chapter Five, section 5.9.9., 5.9.13; and 5.9.18, some members suggested that libraries should have in place library staff who specialize in dealing with distance learners. The establishment of remote libraries was also cited; as well as updating the ICT infrastructure for remote access; and training of staff on use of the ICT resources to deliver services to students. Although some members agreed that they had satellite libraries, they acknowledged that they faced shortages of staff with relevant expertise (training). In addition costly imported materials, limited funds and ever evolving information resources both in print and electronic required constant upgrading and staff training. Librarians also agreed that they did not have much working collaborative efforts and therefore the interlibrary loan service was not really functioning

Other solutions offered by librarians, although not exhaustive, included more staff to keep libraries open for 24 hours; follow-up on regular user-education sessions; increased bandwidth of internet connection and making orientation or user education a compulsory activity. Others observed that more support from management was required and that distance learning should be given equal status to traditional learning programmes.

6.7 Use of ICTs to support distance learning

Recent developments in ICT have been embraced by distance education providers as a solution to the myriad of information challenges that have come to be associated with distance learning (Beldarrain, 2006). ICT has been touted as a solution to the problems facing the delivery of distance learning programmes. However, despite the accolades ICTs have their own challenges especially due to the fact they are always evolving and dynamic. This requires regular upgrading of materials and additional training. These are expensive undertakings in terms of providing the appropriate infrastructure. However training on the use of computers is a necessity that must be undertaken for both the distance learners and the library staff if ICTs are going to have any impact on the delivery of distance education.

6.7.1 Training on the use of computers

In order to find out the level of computer skills of the distance learner respondents, the students were asked whether they received any training on the use of computers. The results showed that a majority of the students (85.1%) had indeed received some form of training on the use of computers, while 14.9% claimed not to have received any training. Since most of the distance learning students are usually part of the working population (Agalo 2008), it is inevitable that they would have been exposed to ICTs in the first place in their working environment or even through the many cyber cafes which they could afford through their working status. It can therefore be deduced that a majority of the distance learners would have basic computer skills and/or are connected to the internet. However searching for useful information to satisfy a learning need requires more than just computer skills or a connection to the internet, it requires one to be information literate.

According to Wilsons' (1996) model which was preferred for this study, searching for information to satisfy an information need is a complex process requiring a variety of interventions for the successful completion and use of the information. This process would therefore require excellent computer skills for both the user and the librarians. Some reviewed literature shows that while library automation has become a necessity in this information age, one of the major challenges experienced by African universities is the readiness of the university libraries in terms of skills and knowledge to implement digital and electronic library services.

During discussions with library staff, most agreed that training of new students is important and they considered ICTs essential to support distance learner's information needs (Chapter Five, section 5.9.29, 5.9.30). At the same time however, it emerged that there were few qualified staff and no distance librarians dedicated for such tasks, either at the main libraries, or branch or campus libraries. Library staff also mentioned that most of the training which they did in terms of user education was provided during orientation and information sessions. They also claimed that due to the ICT infrastructure, low capacity servers, and few monitors in libraries, staff could not offer sustainable training on the use of computers for their users.

6.7.2 Mode of training

In order to determine the relevancy and usefulness of training received, student respondents were asked how they received their computer training. The results from Figure 5.5 shows that a majority of 44.7% arranged their own training, while 31.2% received computer training at their places of work. Only 8.5% received their training through their modules. This was followed by those who received their training during their residential training sessions.

These results demonstrate that in terms of the mode and locality of training, distance learners mostly receive their training outside of the universities at which they were studying. In addition receiving computer training on their own or at their places of work does not comply with some of the standards. This is all the more reason why the Commission for University Education in Kenya, and specifically their Quality Assurance Department, needs to revisit their Standards and Guidelines for open and distance learners. Where necessary the Commission should include mandatory requirements to be followed and to ensure that these are in place before the start of distance learning programmes by any university.

During discussions with the library staff, it appeared from their responses that they were aware of the challenges in terms of the modes or method required to equip distance learners with the relevant computer skills and indeed were directing some effort towards meeting those challenges. However, at the same time, they also acknowledged that it was difficult to solve these seemingly endless challenges which they were faced with as follows:

- Firstly they lamented that during the orientation or information sessions they were not aware whether distance learners were part of the participants. This is due to the fact that they run these sessions for all newly arrived students, regardless of their attendance status. Library staff added that there were also no specific plans in place for distance learning students.
- They also cited the poor ICT infrastructure, lack of orientation for distance learners due to physical distance, frequent power failures and limited library opening hours.
- The library staff also suggested that distance learning librarians who were lacking were better placed in meeting the unique needs of the distance students.
- Another challenge was lack of library user surveys to establish the information needs of distance learners, to enable libraries to customize the resources.
- Lack of policies and guidelines prevents staff from being able to customize the information needs of the students.

6.7.3 Computer skills before the distance learning programme

In order to establish their preparedness, distance learners were asked to rate their levels of computer skills before starting the distance learning programme. This can provide insight into the kind of computer skills which the students might need to prepare them for their user education. Figure 5.6 revealed that almost half (49.6%) rated their computer skills as good, while 35.5% rated their skills as fair. Only 9.2% rated their computer skills as poor and 5.7%, claimed to have excellent computer skills. These results show that only a few distance learners regarded their computer skills as excellent before they started their programme. These results therefore indicate that the library staff need to review their approach to user education.

It is suggested that library staff should utilize a very intense practical or hands on computer skills approach in order for the learners to be able to explore the e-resources to the maximum for their benefit and academic advancement. Even those respondents who claimed to have good or fair computer skills; they would also require this programme, (due to the discussion in section 6.7.5) students need to have user skills that will be able to satisfy information needs. The fact that a student has computer skills is not enough to produce a complete and satisfactory information search to satisfy an information need. The learner requires search skills in various databases

available or subscribed to by the library, and instructions how to use the many e-resources available including the library website.

Simba (2014), observed that the role of librarians are not only to manage the libraries and make them more useful or usable but more importantly their role is to educate users and encourage them to use the resources in the libraries and services effectively. It is the duty of staff in the library therefore to educate all learners on how to acquire excellent computer skills and thus explore fully the library.

6.7.4 Current computer skills

It would be expected that after enrolment and starting the distance learning course; students would have gained some measure of improved computer skills. Therefore distance learners were asked to rate their current computer skills while participating in the distance learning programme. The results of Figure 5.7 show that more than half (53.2%) had good computer skills, while 29.1% had excellent computer skills. Those that had fair computer skills, accounted for 17%; while only one student claimed to have poor computer skills.

The results show that after enrolment, learners had somewhat improved their computer skills. Whereas before enrollment, those who had good computer skills accounted for 35.5%, the result shows that they had improved to 53.2%. Initially those who had excellent computer skills were only 5.7% compared to the current 29.1%. This is a remarkable improvement. These results show that even with the insurmountable challenges faced by the libraries as stated in section 5.9.17, a remarkable effort by the distance learners has transformed those learners who had poor, fair or no significant computer skills. This would go a long way in enabling them to explore the relevant e-resources if these were provided by libraries.

6.7.5 Use of internet or any other electronic databases

The use of the internet to supplement the reading and writing of assignments is a prerequisite for distance learners given their study circumstances, environment, and location. This is provided that such ICT infrastructure is available to them. Equipping distance learners with the necessary computer skills is therefore undeniably one of the compulsory skills required in order for them to

able to explore such services available on the internet. The results showed that almost all the distance learners (99.3%) used the internet and other databases to supplement their reading and the writing of their assignments. As already stated, distance learners have unique needs and hence require special arrangements in order to meet those unique needs. Some universities (especially in the developed world) have already taken proactive and remedial measures in terms of setting up sections in their libraries to handle the necessary services exclusive for distance learners. It is not unusual to see the position of ‘distance librarian’ advertised in those countries. This has not happened in Kenya as confirmed by library staff when interviewed. Left with few options distance learners substitute their physical presence in libraries and the printed sources of information with the e-resources which they can possibly access from the internet.

In the reviewed literature, it was also confirmed that due to the circumstances and environment of the distance learners, ICTs seem to be the ultimate solution to distance delivery challenges (section 3.3.8). It has also been accepted that ICTs can mediate the separation between lecturers and students through the use of telephones, television and more recently computers. These make information easily accessible and easy to introduce e-learning, a cherished concept in the delivery of distance education. According to Fahad (2010), e-learning has increased the use of computers and the internet tremendously. It is now recognized that educational materials delivered through the internet motivate students to explore the internet even further. By extension this results in student’s additional use of the internet to discover new methods of navigating in order to find new knowledge related to their studies. Therefore apart from helping isolated students far removed from the university and its resources, technology is also adding value to the students’ needs in the discovery of new knowledge which is available to them. A study by Wawireand Omboi (2010) observed that most library users tend to prefer the internet sources for their studies and research work over traditional library print resources. While this situation is true of all library users, it is more conducive to distance learners as affirmed by some of the respondents. Due to their circumstances and environment, distance learners are unable to access traditional library services. Such services were planned for the traditional full-time student as stated earlier in Chapter Five, section 5.5.12, when a library staff member commented that there were no “real plans” for distance learning students because all the plans were for all students. In addition it has also been established that distance learners are mostly the working

population of Kenya. Due to the availability of the internet at their work places and the use of their own laptops, the internet and e-resources has become the preferred source of information.

During interviews with library staff (Chapter Five, section 5.9.31), it became apparent that the majority of staff were aware that distance learners prefer or would benefit more from e-resources and that they considered e-resources and the internet essential in supporting distance learners' information needs. It was confirmed that some modest attempts have been made so that all library users can access (where possible) library resources remotely from their laptops through the OPAC. One respondent actually confirmed that distance learners can access the OPAC from anywhere via the website. Online databases can also be accessed by distance students in the comfort of their homes or work places through the remote access option. However earlier discussions have shown that the inadequacy of the ICT infrastructure has hampered the access to resources.

It would appear from the results of the distance learners' responses and interviews with library staff, that the preferred method to supplement the reading and writing of assignments by distance learners is the internet as well as any other databases, when and if these are available and functioning efficiently. It is also clear that ICT is crucial in helping academic libraries provide comprehensive and reliable information services for their users including distance learners (Fahad 2010). However, stakeholders, including the ICT departments at the university, must be involved in the planning of the distance programmes so as to ensure that all stakeholders are brought on board when the programmes are implemented.

6.7.6 Payment for the use of the internet

Academic libraries in Kenya seemingly face a myriad of overwhelming conditions, but the main challenge as reported by some distance learners and library staff members is the constant scarcity of funds. Both the library staff and learners would prefer the necessary e-resources conducive for excellent delivery of information to satisfy their needs. However given the perennial shortage of funds, it was important to ask students about payment for the internet facilities which can be more expensive than print resources. The results from Figure 5.8 show that the cost for use of internet was primarily met by individual students or their family for 67.4% of the learners; while

23.4% of the distance learners confirmed that their costs were met by their institution (university). Only one learner stated that their internet costs were met by their employer.

It is possible that once learners pay their tuition fees all the costs are factored in as reported in (section 6.6.6). The costs of the internet may have been included in what is known as the 'tuition' fee, as is the practice in most academic libraries. Librarians are also faced with constant challenges on where to get funds to supplement the meager resources received from their institutions. Online services are expensive. In order to implement excellent online services such as the ones required for delivery of distance learners' information needs, require financial resources and support from the management. In addition it is clear from a majority (67.4%) of distance learners who pay their own internet costs to ensure their information needs are met, given their context distance students would not have access to the dedicated internet computers in the typical main campus libraries.

6.8 Barriers and hindrances to meet distance learners' information needs

According to the results of responses from the distance learners and library staff, the information needs of distance learning students are not being met adequately due to a variety of hindrances. The main ones are mainly due to their study circumstances being far removed from the university. Therefore according to Maenzanise (2002), these would include the distance from the available libraries at the main campus, the study circumstances at home, the challenges of the distance learning programme itself (which has a distinctive profile) and challenges related to source of electricity or lack of it, among other challenges. This section discussed the results of the main barriers and hindrances that affect the information needs of distance learners and possible solutions to such hindrances.

6.8.1 Distance as a barrier or hindrance to information needs

Historically, university education was a preserve of a privileged few especially those who scored high marks in their Secondary or High School final examinations in Kenya. Later on as confirmed by some studies Anyona (2009) and Kavulya (2004), correspondence courses that would be the predecessor of distance education were initiated in the 1980s. Distance learning allowed an unusual group of students to obtain admission into tertiary education as reported in a

study by Agalo (2008). These distance learning programmes became an incentive to the working population in Kenya for those seeking promotion or change of careers. The main challenge for this new opportunity was distance as most of these students were far removed from the universities. In order to determine distance as a barrier or hindrance, respondents were asked how far they had to travel to get to the main library or information center. Table 5.18 showed that 30.5% of the distance learners claimed that they travelled between 1 to 10 kilometers, while 29.85% of the learners stated that the distance to the university library was between 11 to 30 kilometers. Those that reported a distance of 31 to 50 kilometers accounted for 12.8% while 10.6% claimed a distance of 51 to 100 kilometers. The distance learners who reported a distance of more than 100 kilometers accounted for 16.3%.

The issue of distance as a barrier or hindrance for information services to satisfy their needs for this caliber of learners is rather complex. The distance learners are scattered in various parts of the country while some live near the university libraries and main campuses, others are as far away as 500 kilometers and more. A study by Maenzanise (2002) found that those who lived near the main campus could easily have access to meet their information needs, potentially at the main campus libraries which often have better resources than branch or satellite campus libraries. This would also apply to those who lived in urban areas or centers. There are other barriers such as opening hours given that distance learners attend lectures at odd hours or are based away from main campuses as opposed to the traditional student. However, a large segment of distance learners are also scattered all over the country. Those learners who live in remote areas face the greatest challenges due to the absence of libraries in those areas according to the students, and this has a negative impact on their ability to satisfy their information needs.

It also emerged that these distance learners have to meet travel costs to visit libraries and this is an additional burden for them due to the period it took them to get to the library; although they were not guaranteed that when they finally get there; their information need would be satisfied thus rendering such an attempt a waste of scarce financial resources. In the end this would prompt a learner to do a cost benefit analysis of weighing the benefits against the rewards of travelling such long distance without any guaranteed success. Nwezeh (2010) states that it not unusual for a distance learner to go through their programme without ever visiting the library.

Some scholars would term this as an abominable academic situation often resulting in academically poor graduates.

Some of the challenges compounded by the distance from the university would have been addressed if management had taken into consideration distance learning programmes while planning the library services. However, as stated by Wasike and Munene (2012), the services were planned for traditional students leaving non-traditional students to fit into a system that was meant for regular students who are full-time on-campus. Hence there is need for university libraries to adapt to the changing profiles of distance students. In addition some of the current library rules and regulations at the moment do not allow for extended opening hours of the libraries, which would enable the distance learner to make use of the services and resources. Some of the libraries are closed at night, Sundays and Public Holidays. These are the time periods when a distance learner would be away from their work station but unfortunately cannot access and use the services during that period because they are closed. Another aspect of these rules and regulations which impact on the distance learners in terms of services is the short loan collection and interlibrary loan facilities.

Due to declining funds resulting in financial deficiencies in academic libraries in Kenya, Kavulya (2004:23) argued that there is a perpetual shortage of funds to sufficiently acquire a large stock of resources relevant to the courses. In view of this, decisions are made by library managers to place scarce (or what sometimes are referred to as restricted materials) on short loan which means these types of materials are required to be used in the library only. This short loan service together with the interlibrary loan service, rare books, theses and journals are regulated by strict rules resulting in heavy fines charged to any defaulters if this rule is infringed. These rules include distance learners regardless of their distance and time constraints. This inhibits the use of such resources for distance learners.

6.8.2 Source of electricity as a barrier

In section 6.7 it was reported that the ICT infrastructure is a solution to many of the problems that distance learning programmes face. An uninterrupted supply of power is therefore necessary for the smooth running and use of all electronic equipment required by distance learners to

satisfy their information needs. The results showed that almost all distance learners, (92.2%) claimed to have a permanent power supply, and only 7.8% cumulatively used alternative sources of power such as battery power, gas cylinders, candles or paraffin.

While the majority of distance learners have a permanent supply source of electricity seemingly from the national grid and would appear to be connected to regular power supply, the reality on the ground is different. During discussions with library staff, it emerged that although the strategies and proactive measures to provide especially online resources to distance learners even in remote areas are being considered or are in place; one of the main challenges (among others) is frequent power failures (Chapter Five, section 5.9.17). Therefore even though a majority of distance learners stated that they have permanent power supply; they are faced with regular power failures, load shedding and power outages. All these disrupts their learning through regular interruptions, thus impacting negatively on their necessary conducive learning environment and access to online library resources.

Figure 5.9 revealed that 41.8% of the students had fairly difficult home study circumstances, while 38.3% reported that they had convenient home study circumstances. Those who stated that they had good home study circumstances accounted for 15%. Only a few respondents reported that they had excellent home study conditions. There were a few who claimed to have “practically impossible” home study circumstances (2.8%).

6.8.3 Challenges of the distance learning programme

In the introductory section of this study (Chapter One, section 1.2.1) it was reported that there was an urgent need in Kenya to expand higher or university education to accommodate the products of the free primary and secondary education system. The then Minister for Education was reported as urging universities to expand access to meet the growing need of university education. This included, where possible to start 24 hour learning programmes so that those who qualify for university education were not left out (Kamar, 2012). Added to this is the hunger for higher education by individuals and families who believe that education is the only solution to alleviate poverty. Due to the fact that the available universities could not admit all the potential

students requiring university education, distance learning became the obvious choice for most people.

When universities were encouraged to initiate income generating activities, distance learning became the obvious choice. This resulted in an increase in student numbers in such programmes. Distance learners were asked to rate their fear in regard to studying through the distance learning programmes. Table 5.19 shows that the worst fear for the learners was how best to plan their time for 66.7%, while 61% claimed their worst fear was how to get time to study. How to get materials for assignments, tests and examinations was ranked third by 59.6% of the learners followed by how to get a suitable place to study by 50.5% of the learners. The issue which cause least fear for distance learners was how to cope with examinations for 48% of them.

As reported in section 6.8.3, Wasike and Munene (2012) noted that the worst enemy for distance learners in their academic development was how best to plan their time. This is not unusual however given that they work very tight schedules due to their working conditions. This leaves the learners with little or no time to plan for their studies. Naturally in this kind of scenario it also follows that they are not able to get time to study which was ranked second by 61% of the students. Neither is it surprising that they experienced a lack of a suitable place to study (50.4%) given their home study circumstances as reported in section 6.8.2 above. It is also not surprising that students ranked the fear to cope with examinations (48.9%) but this could be attributed to the fact that if distance learners were given all the necessary support they required in terms of their information needs, coping with exams becomes the least of their worries.

Therefore distance learners face challenges related to lack of time to study due to tight work schedules, unconducive home study conditions and lack of a place to study, among others. Apart from these challenges, the library staff mentioned during interview that distance learners faced the following challenges (among others) which need to be addressed:

- Librarians were not emphatically involved in the pre-planning of distance learning programmes (Chapter Five, section 5.9.6). The plans in place are ideally for full-time students therefore distance learners have to fit in with such plans. There are no specific

services for distance learners nor are there distance learning librarians dedicated to their needs.

- Online services are in place but do not have an impact due to poor ICT infrastructure, lack of power, frequent load shedding and power outages (Chapter Five, section 5.9.14).
- Perennial shortages of funds mean lack of adequate purchase of materials and equipment hence limiting remote access and lack of qualified IT staff and e-resources.
- No regular evaluation of user needs (Chapter Five, section 5.9.8).
- Apart from involvement of librarians in the pre-planning of distance learning programmes (Chapter Five, section 5.9.21), there is need for mandatory policies and guidelines for distance learners. These should be in place before such programmes are approved or authorized for implementation.
- More funding should be targeted towards the provision of information services to distance learners (Chapter Five, section 5.9.23); more management support is needed from the university in supporting is needed efficient and effective service to distance learners and staff need to be trained on how to deal with such users (Chapter Five, section 5.9.24/25).
- Information centers or digital libraries need to be established in Kenya which are dedicated to distance learners. (Chapter Five, section 5.9.26).

These points summarize the challenges highlighted in the earlier discussion. In terms of the barriers affecting students use of information sources, Table 5.20 revealed that lack of time (70.2%) accounted for the highest barriers faced by students in terms of the use of information-sources. This was followed by lack of technical skills for 52.5%. Lack of a well-equipped library was a barrier for 48.9%; lack of useful materials for 45.4%; and lack of equipment and the costs for purchasing for 43.3%. Living in isolation was a barrier for 41.8% - this is a situation which perhaps cannot be helped unless the learners moved nearer the university premises; followed by the library systems being a barrier for 29.8% of the distance learners.

In tandem with challenges of the distance learning programmes, it would also appear from the results that time or lack of it was the worst barrier affecting use of information sources for distance learners. A study by Kavulya (2004), concluded that in order to satisfy the library and

information needs of distance learner, there is a lot more to do in terms of addressing the lack of institutional policies, poor planning of distance learning programmes, inadequate physical facilities and professional staff, lack of adequate funding of university libraries and poor ICT infrastructure in Kenyan universities.

6.8.4 Suggested solutions to barriers

As a sequel to the barriers identified, learners and library staff were asked to suggest ways to overcome these barriers. Table 5.21 shows that 25.5% of the distance learners thought investment in the ICT infrastructure would be the preferred solution to barriers in using information resources; followed by time management which was suggested by 22%. A remarkable low number stated that buying more books was the solution (12.1%); while financial support from government, training on ICT and user skills was a solution (section 6.8.4) for 10.6% of the learners respectively. The training of staff was a solution for 5% which some studies as stated above (section 6.8.4) emphasized citing the need for more qualified trained personnel, both in library and especially in IT skills or qualifications. Enhancement of student tutor interaction and provision of more libraries in the neighborhood were solutions for 3.5% of the learners; while equipping branch libraries and an improved government subsidy were a solution for 2.8% of the learners. Interlibrary collaboration and the need for institutions to offer services closer to the students were offered as solutions by a few students.

As mentioned earlier these results confirm that the ICT infrastructure remains the most preferred solution to barriers as reported in some of the literature reviewed. As reported in Chapter Three, section 3.9, in a study by Fahad (2010) it was reported that ICTs can play a vital role in the delivery of distance education technology which plays a pivotal role in e-learning in that it is convenient and can solve distance problems for both instructors and students as it mediates between the two.

Apart from these examples, other studies have also noted ICT support as a solution to barriers that affect learners' use of information sources. A study by Anyona (2008:133) concluded that although there were resource centers all over Kenya which were to facilitate distance learners educational needs, they were inadequate. Therefore distance learners had to travel all the way to

the main campuses to get these study materials. The same study recommended that there was a need to mobilize all stakeholders and the government to establish infrastructure that would support ICTs in the provision of open and distance learning. This mobilization would or should involve provision of more funding for the required ICT infrastructure from the government and appropriate mandatory policies, guidelines and standards. These provisions would require institutions planning open and distance programmes to implement such before approval of distance learning programmes would be authorized.

During the semi-structured interviews with library staff, it also emerged that an excellent or adequate ICT infrastructure was considered an essential and good solution for supporting distance learners' information needs. This was noted as enabling distance learners to access online resources from wherever they are at their convenient time; with time management being one of the students' main challenges (Chapter Five, section 5.9.14).

6.8.5 Additional comments

Additional comments overlapped with earlier responses made by the distance learners. Table 5.22 revealed that 24.8% of the distance learners would prefer a wide range of useful materials. Other comments were in response to the nature of distance learning programme skills. Improvement of ICT infrastructure was again mentioned. Other suggestions included that more residential sessions should be initiated. There were also suggestions on setting-up remote university libraries and that the Kenya National Library Services (KNLS) should setup branches in all remote areas in Kenya in order to compliment any remote university library services available.

6.9 Summary of the chapter

This chapter discussed the findings from the two sets of data collected from the questionnaire and the interviews. The discussions comprehensively followed the data presented in Chapter Five in conjunction with Wilson's (1996) model and the RBL. These formed the conceptual framework which guided this study in terms of the provision of library services for distance learners in academic libraries at the two institutions. The chapter discussed library services and resources available to distance learners, their computer and information literacy skills, and the

challenges and hindrances which they experienced in satisfying their information needs, together with the solutions to such challenges.

CHAPTER SEVEN

SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

In Chapter Five data of the study was presented which was followed by a discussion of the research findings in Chapter Six. Chapter Seven presents the summary of the findings of the study, the conclusions as well as the recommendations that emerged from the study. This is based on the data presented and discussed in relation to the purpose of the study and the research questions that guided the study. The study investigated the provision of library and information services for distance learners in two university libraries in Kenya. The findings of the five key questions which were formulated to investigate the study are summarized to establish the levels at which the research questions were answered and to determine whether the study objectives were met. The chapter is organized into five sections, namely a summary based on the research questions; originality of study contributions to theory and practice; suggestions for future studies, conclusions and recommendations and finally a summary of the chapter is presented.

7.2 Summary of the findings based on the purpose of study and the research questions

The findings of the study are based on the research data gathered from the two data collection methods that were used for the purpose of the study. The study used a mixed methods approach as both a questionnaire and semi-structured interviews were used. In the first approach, 141 questionnaires were distributed to postgraduate distance learners at both the University of Nairobi and Technical University of Mombasa. These students were selected based on their exposure and experience in their use of libraries. The second method involved semi-structured interviews conducted with deputy university librarians and subject/reference librarians because they were deemed to be attending to distance learners in the absence of designated distance learning librarians in Kenyan universities. The summary of the research findings was based on the five research questions developed for the study which were as follows:

- 1) What were the information needs of distance learners at the universities?
- 2) What library services were offered to distance learners at the universities?
- 3) What support did distance learners receive in terms of user education or orientation?
- 4) What challenges did distance learners face in accessing library services and resources?

5) What strategies could be adopted to overcome the challenges?

The following section presents a summary of the findings in relation to each question of the study as presented above. Although a lot of effort went into the designing of the questionnaire to ensure that the categories of information were unique, there appears to be an overlap of content and similarity in some categories of responses. The summary of the findings will follow the order of the research questions presented above.

7.2.1 What were the information needs of distance learners at the universities?

The study findings revealed that the information needs of distance learners are unique due to their study circumstance including being far removed from universities and in most cases studying alone. Their information needs therefore were based on the context of their studies. The findings also revealed that most universities in Kenya offering distance learning education planned information services without taking into account the distance learners' information needs. In addition these distance learning students had to fit into these arrangements or systems. This shows that the services provided were for full-time students and that distance learners' needs were not considered by library staff or university management. The findings revealed that a majority of distance learners needed information to prepare for examinations. This seems to demonstrate that distance learners are mainly concerned in passing their examinations (section 6.5, and 6.5.1). In addition the findings also revealed that distances learners needed information to write their assignments and tests.

Lecturers ideally would prefer that students prepare well by reading in advance in order to gain some prior knowledge about the topic or subject so that they are able to actively participate in the lectures and discussions during the classroom contacts sessions. However, this approach favours on-campus or full-time students. The findings thus revealed that distance learners are passive learners who are not keen on having prior knowledge or information to engage actively but focused only on passing their examinations or tests and getting good grades for their assignments.

7.2.2 What library services were offered to distance learners at the university?

In terms of services offered specifically for distance learners, the results showed that none of the library services specifically targeting distance learners. The services were ideally planned for all students regardless of their status or category at the universities. The findings revealed that the resources available were purposefully sourced for all users of the university without any plans or arrangements being made for distance learners. The findings also revealed that there were no institutional policies to guide the provision of resources for distance learners. In addition without adequate funding and inadequate facilities and equipment, the library services offered to distance learners remained the traditional ones offered to all students in university libraries in Kenya. This ideally included printed books for loan, journals and newspapers, photocopying facilities, modest internet facilities, reference services and some government publications. The findings showed that interlibrary loan facilities were not actively used by distance learners because they were not aware of them and library opening hours did not suit distance learners.

In addition although the internet, online and other web-based services were offered to distance learners, they were not regularly available due to the lack of appropriate ICT infrastructure. Other services seemingly offered included subject/reference librarians for consultation, enquiry services, short loan facilities, remote library facilities, modest resource centres in areas where satellite campuses were setup, and information delivery through the postal services in some cases. Arrangements were also made by libraries for distance learners to use other libraries services, for example public libraries, available to distance learners near their locations. The findings revealed that current awareness services and selective dissemination of information services were also offered in some libraries. These however were usually confined to libraries on-campus which did not benefit distance learners who would have to travel to the library. Vital services offered in terms of user support services such as orientation and information literacy (while available to distance learners) were meant for full-time students or were offered at periods that did not favour the attendance of distance learners. The findings thus revealed a majority of learners were of the view that the services offered to them only met some or none of their information needs.

7.2.3 What support did distance learners receive in terms of user education or orientation?

Overall the results revealed that there was little support in terms of user education and orientation for distance learners. Moreover the results revealed that it was not distinctly clear which approach was most favorable or required for distance learners. The study found that the orientation was offered on first contact with the university. However as it was not intended for distance learners it did not benefit or impart meaningful skills to these students. The findings did reveal that most distance learners had good computer skills gained from their work environments and internet use. The utilization of such skills would support their information needs.

7.2.4 What challenges did distance learners face in accessing library services and resources?

The study discussed the challenges experienced by distance learners in accessing library services given their study circumstances and unique information needs. The findings revealed that lack of time or how best to plan were the most challenging barriers experienced by distance learners in meeting their information needs. It was revealed that distance learners seldom found the time to visit the library due to distance. The most discouraging aspect was that when such learners finally visited the library more often than not they did not find the books which they required and sometimes would not find the space or seating to work in the library. Coupled with this was their lack of information search skills, which meant that students were able to find the relevant information which they required. In addition the findings also revealed that time management seemed to cascade or impact on other learning activities for the distance learner. This included time to read or study, time to attend to lectures, time to do assignments and time to obtain materials from the university library.

The study also revealed that the other main challenge was the lack of user education and information search skills of distance learners in accessing library services. In addition the poor internet coverage and source of power which hindered students finding or accessing the information that they required at a convenient time and place, given their study circumstances being far from the university. In addition, the study also revealed that distance learners do not understand the complex classification schemes used to classify materials in libraries or the shelving of books among other materials. Without a well-grounded user education training, these

students are not able to gain access even to those materials that are relevant and actually available in the library. Moreover the frequent power outages, load shedding and the inability to use the OPACs competently made use of online and e-resources difficult.

The findings also revealed that some of the challenges faced by distance learners could easily be dealt with administratively by the librarians. The study indicated that library staff need training in IT skills in order for them to be able to impart the same knowledge to learners. The ICT infrastructure, often cited as the solution to the challenges of access from a distance, needs to be supervised by competent IT staff in the library for it to have any impact. Other challenges revealed by the findings included lack of collaboration with other libraries or information suppliers to assist learners with interlibrary loans; library staff attitudes towards their clients making it user unfriendly; inadequate funding for libraries and specific funding allocations for distance learning information needs; lack of policies dealing with distance learners; lack of relevant staff trained to deal with distance learners' information needs; lack of involvement of librarians in the pre-planning of distance learning programmes; and above all, lack of adequate support from management in support of libraries as key academic departments and custodians of the information of their universities.

7.2.5 What strategies could be adopted to overcome the challenges?

The study determined the possible strategies that could be adopted to overcome the challenges to accessing library services by distance learners. The findings revealed that the most challenging attribute was the ICT infrastructure. Given the circumstances and environment of distance learners due to them being far removed from the university, a sophisticated ICT infrastructure would be the best strategy to overcome access to library services. The study also revealed that distance learners needed to plan and adopt good time management practices despite their very tight work schedules, family and social commitments. The study also indicated that more funding from the government or the university would help in the purchase of more relevant books, journals, government publications, reference materials and more subscriptions to a variety of databases among others. This would be a good strategy as these would complement the available, but mostly outdated; print materials in the libraries. In addition, more funding would also bring in more qualified staff including IT staff, and equipment which is required and

necessary for information searches, processing and storage of information as well as training for both the learners and members of staff. Moreover such funding would enable the purchase of the required alternative power supplying equipment in the event of power outages and load shedding as back-up. The findings also revealed that good ICT infrastructure and other electronic equipment would enable staff to train and acquire the necessary technical and computer skills to be able to share such knowledge with users. This approach would allow both staff and learners to have access to other collaborating university libraries' resources which would in turn supplement the perpetual inadequate resources available in most academic libraries. This would inevitably allow resource sharing and interlibrary loan practices. The findings also revealed that more funding would also support the required establishment of remote study and resource centres as recommended by some library staff. Such centres should be setup where extra mural centers and satellite campuses existed or were being established. This would complement the main campus libraries' resources in order to bring library services closer to remote distance learners.

The study also revealed that library professional associations (such as the ACRL in USA) have an active role to play in ensuring that standards and guidelines that exist are regularly revised, approved and implemented in academic and research libraries. This is not the case in Kenyan academic libraries. The official quality assurance department of the Commission for University Education (CUE) needs to have mandatory standards and guidelines for academic libraries. These should be enforced and only after approval should the institutions be authorized to initiate distance learning programmes. The study also revealed that professionals and professional associations in Kenya such as the Kenya Library Association (KLA) and Kenya Library and Information Services Consortium (KLISC) need to be more vocal and proactive in campaigning for equal standards for all academic or university libraries in Kenya. These structures should be actively involved in or officially incorporated into the quality assurance department of CUE as a strategy to access the diversity and vast talent available from these bodies of experienced professionals. Such standards should also be based on the entitlement principle and philosophy of the right of access to information as provided for in the new RoK (2010:27), enacted on 27 August 2010.

The findings also revealed other solutions and strategies to overcome access challenges. The pre-planning and involvement of librarians from the outset was offered as part of the strategies as well as teamwork amongst the teaching staff, IT personnel and librarians which would result in good teamwork. Furthermore the study also revealed that equipping library staff members with teaching skills and other types of training generally would impact on their abilities to resource learners with user education knowledge. This would result in an improved understanding of their information searching skills. Training would also enhance student tutor and lecturer interactions. Although there are charters which claim to protect the rights of all stakeholders (including distance learners) displayed strategically in Kenyan universities, the study indicated that there should be appropriate written procedures and policies for the libraries which should include vision and mission statements, goals and objectives which should be followed. Distance learning posts or sections in academic libraries to handle distance learners' unique information needs would be a good strategy as well as the establishment of remote libraries by the Kenya National Library Services to compliment any remote university library services available. The establishment of digital centres and information resources would be ideal. This confirmed that an exemplary ICT infrastructure was the preferred solution in accessing library services by distance learners. However the major solution to all these challenges is the dedicated support from the government and the university management. This unequivocal support was deemed necessary to facilitate access to library services by distance learners.

7.3 Contributions and originality of the study

The reviewed literature indicated that there has been some modicum of studies undertaken on the provision of library and information services for distance learners in Kenya. As stated in Chapter One (section1.6), this was confirmed in a study by Kavulya (2004) which stated that it was evident the issue has not been addressed adequately. In the same study, it was observed that there was a dearth of literature on the subject of library services for distance learners in Kenya; and that both scholars and librarians have not given the topic much attention. There was recognition that an adequate supply of library and information services to distance learners in Kenya is critical to the success of distance learning programmes in the country. Although this observation was made several years ago, the situation currently remains the same. This study therefore contributed further insight to a critical area of the education sector in Kenya.

Although the CUE has developed Standards and Guidelines (2014) for University Libraries in Kenya, as stated in Chapter Six (section 6.6.17) this study found that such standards need not only constant revision and updating, but also appear to be optional rather than mandatory. Universities have been known to initiate and implement distance learning programmes before any inspection and approval. A close scrutiny of the standards also revealed that there was no clause in the standards that made them mandatory before implementation of distance learning programmes. Library and information services and distance learning programmes are very important to the Kenyan education sector (particularly distance learners) and potential employers. They thus require rigorous scrutiny by the relevant authorities in order to ensure the credibility of the distance learning degree programmes. As mentioned earlier in this study, such standards need to be made mandatory. Distance learning library services and related facilities need to be inspected and approved or authority granted first to ensure the credibility of such programmes. This study will contribute towards the development and improvement of policies and such standards in academic libraries being constantly reviewed, updated and made compulsory both in government plans as well as at university level.

The study findings have also offered effective solutions to academic libraries for distance learners, not only in Kenya but also in other parts of Africa. It has also initiated a revitalized awareness by both library managers and university managers of their overall perception and the importance of their roles in the provision library and information services for distance learners. This study has also highlighted the need to revisit the practicality of various policy papers but especially the so-called charters prominently displayed in universities. Although these are well intended in principle, in practice they are largely ignored. While this study may not be the first to investigate the difficult conditions and challenges that distance learners face in terms of library services, access, and awareness of services available for them, it is one of the very few to do so. As a result of this recommendations and requirements of new policies which should include posts in academic libraries such as distance learning librarian or distance learning services or indeed open and distance libraries and digital centers dedicated to distance learning. Such terms have not been used in Kenya before, hence the novelty of the study.

The study adopted the RBL model which calls for a learner-centered approach to learning and teaching. Distance learners (as confirmed by the findings in Chapter Six, section 6.5 and 6.5.7) are only concerned with passing their examinations and the successful completion of their studies. They have little time for face-to-face interaction seemingly due to their study circumstances, hence their preference for learner autonomy. Some of the attributes of the RBL include the identifying and securing of relevant materials; and teachers and librarians becoming motivators who work with administrators as a team to ensure the success of the students. This is a similar situation that occurs for distance learners. They require relevant materials to satisfy their information needs and teamwork from all stakeholders to support their learning. Adaptability to different learner approaches and subject areas is an essential feature of support for distance learners. Distance programmes should be afforded equal status of that of mainstream programmes from university management. There is therefore a need to train all library staff to support both mainstream and distance learners equally. The RBL attributes and values therefore have been critical in the proposal of a new model for distance learners in Kenya. This proposed model has a new framework with critical constructs that are determinants in the provision of quality library and information services in a student-centered learning environment. This augurs well for distance learning not only in Kenya, but also in other parts of Africa. This model also places the position of the librarian on equal terms and recognition with faculty in their teamwork, a situation which currently does not exist in most universities in Kenya. This is seemingly because librarians are not provided the same status as faculty (Chapter Six, section 6.6.11). The new proposed model for library and information services which takes into consideration the unique information needs of distance learners and a variety of attributes required for distance learners in Kenya will be discussed in the following section.

7.4 Proposed model

In terms of contributions to the body of knowledge in the discipline of library and information studies, the study has proposed a new model of information needs for distance learners in Kenya. Based on the research findings and borrowing some attributes from the RBL model used for this study, the new model provides the way forward and useful inputs to the Government of Kenya through the university's standards and quality assurance regulator (CUE). The model has also provided inputs in terms of attributes such as teamwork between library staff and members of the

faculty and all other stakeholders, for the sole purpose of delivery of an exemplary provision of library and information services, not only to distance learners but to all library users as a whole. The attributes in the model are not entirely exhaustive, but reflect some of those which have been found to be important. In addition other concepts and attributes such as training, attitudes of staff, relevancy of sourced materials and new concepts such as remote libraries and digital centres of distance learning are the central focus depicted in Figure7.1

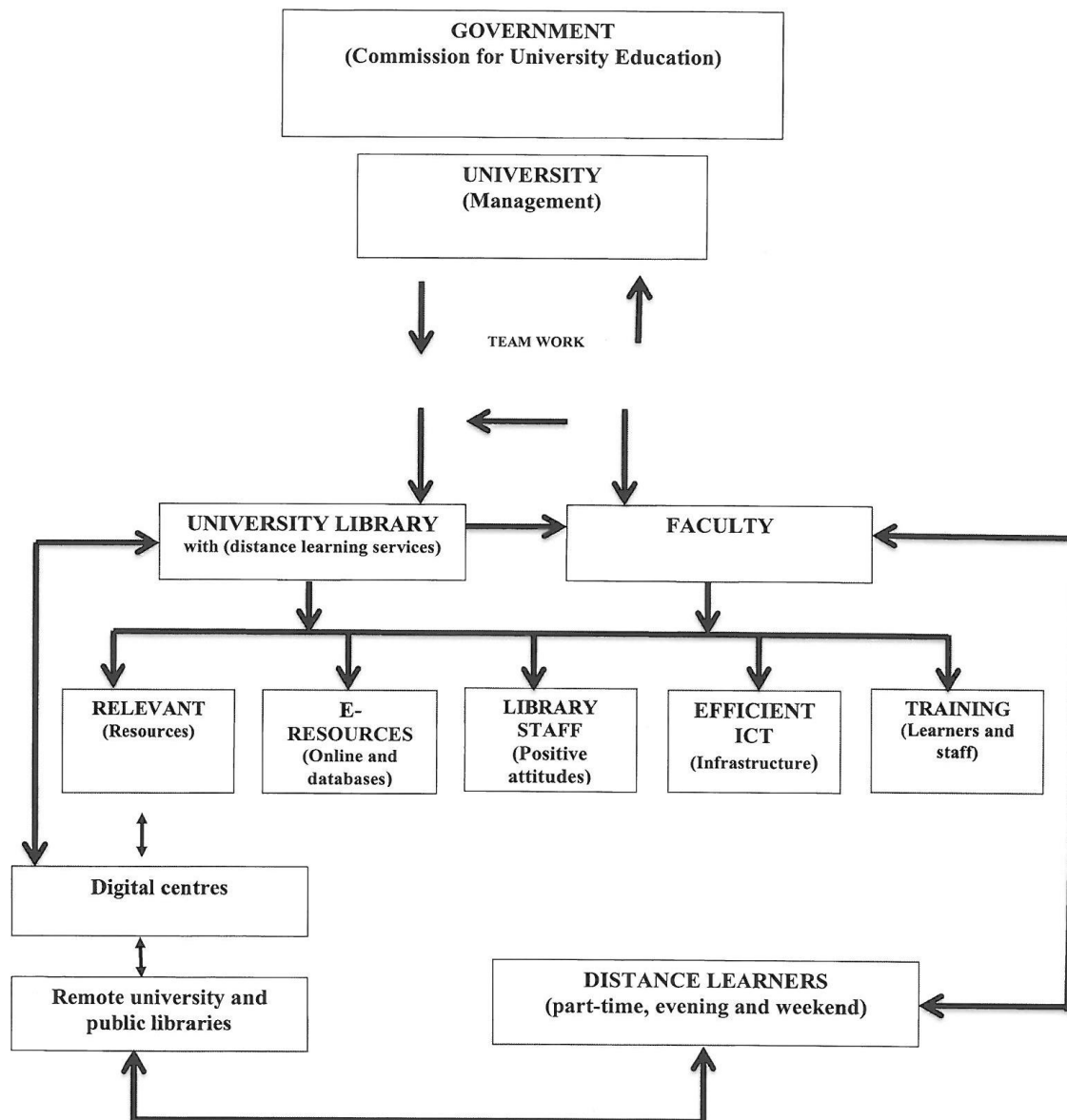


Figure 7.1: Proposed model for information needs of distance learners in Kenya
Source: Researcher (2015)

7.4.1 Government and Commission for University Education

According to the research findings, one of the main barriers of access to information by distance learners is ever diminishing financial resources (Chapter Six, section 6.8.1). Libraries rely on funding from the government through funding allocated to universities. The government therefore has a vital role in terms of allocating and ensuring that the funding allocated for library activities are used for the purposes for which they were intended. This is important in order to curb the prevailing trend in some universities who, after allocating funds as required by the budgets presented by the librarians, can re-allocate the same funds to other ‘worthy’ causes, sometimes without reference to the deputy university librarian. As the study has demonstrated, the role of the university library as revealed by the results is equally important (if not more important) given that the quality of academic programmes rely on the efficiency and relevance of the library resources. Suggested solutions indicated that it is the duty of the government through the CUE to ensure that this is undertaken and that no distance learning programmes are implemented by any university before their facilities have been inspected and duly authorized. The CUE has this mechanism in its standards and guidelines for open and distance learning library services. CUE should ensure that these standards are mandatory and duly observed before implementation of any open and distance learning programme. The researcher also understands that due to financial constraints some of the recommendations are easy to implement especially the short term ones while the longer term may take long to implement due to a variety of reasons and relevant priorities.

7.4.2 University management

The findings of the study indicated that university management may have contributed to the poor state of academic libraries in Kenya (Chapter Six, section 6.6.17). The proposed model therefore has placed university management immediately after the government and the CUE as the regulator of university education in Kenya. This is so that it can rigorously ensure that the standards, policies and guidelines offered to academic institutions are not only implemented but also maintained with regular inspections to maintain consistency and compliance. According to the findings, the management of universities are known to undertake projects without or with minimal involvement of the deputy university librarian. Projects such as planning and construction of library buildings and library automation are implemented by certain universities

with input only from project managers of those universities and ICT personnel for ICT-related projects. Senior managers of universities have also been known to divert funds which were allocated to libraries to other ostensibly worthy causes, even when the library is financially challenged. As stated in Chapter Six, section 6.6.17, there is a rule that requires universities to spend at least 10% of their budgets on the acquisition of library resources. However most universities routinely ignore such a rule or are yet to adhere to this rule or regulation.

Such a practice has a direct impact on the inefficiency, inadequacy and poor provision of library and information services, not only to distance learners but to the whole university fraternity. The proposed model has highlighted the responsibility of the CUE and its critical role as a regulator of university education in Kenya to ensure that, as proposed by the model such challenges are addressed from the outset and that diligent checks are undertaken by both university and library management. This would ensure good management practices as per the provided, hopefully enhanced and mandatory library standards and guidelines.

7.4.3 The University Library and Faculty

It is assumed that all departments and sections of universities in Kenya are working in harmony and together for a common goal which is the successful implementation and quality of all programmes of the university. However as revealed by the findings, there seems to be certain gaps in terms of teamwork and co-operation in the pre-planning of university programmes, especially distance learning programmes (Chapter Six, section 6.8.3). The proposed model therefore places emphasis on teamwork between all stakeholders especially for the successful implementation of all university programmes, including distance learning programmes. The proposed model therefore regards teamwork and the involvement of library staff in the planning and implementation of all programmes every step of the way as very important. The research findings affirmed that there is a need to involve library staff in the pre-planning of distance learning programmes so that they are able to cater for the information needs of distance learners. Such needs include the availability of relevant materials, orientation sessions about services, and awareness of their rights as distance learners as enshrined in the policies of the university and charters. It is not good practice to assume that distance learners will automatically obtain some knowledge about services that are available to them without proper orientation. The teamwork

between library staff in terms of communication skills, information literacy and use of computers, if done jointly with faculty members, is crucial in imparting the relevant skills and knowledge to distance learners. This would result in such learners becoming knowledgeable and skilled in the use of all the services available to them and add value to their learning and understanding of concepts. This teamwork will also remove the notion that distance learners are 'half baked' graduates because they are academically discriminated upon, a situation which was revealed by the study's findings.

The research findings also revealed that library services are ideally planned for all university students without any consideration for distance learners. It is up to the distance learning students to fit themselves into the process or to find out how these services can be of benefit to their learning. The study revealed that in the developed world, the position of the distance learning librarian is a regular position in universities which offer distance learning programmes. However in Kenya this position is not explicitly stated in the library staff establishment hierarchy or library organogram. It is also not shown in the Fourth and Fifth Schedules which deal with Standards and Guidelines for Open, Distance and e-learning and Standards and Guidelines for University Libraries in Kenya. A scrutiny of most library rules and regulations, guidelines and university charters confirmed that no mention is made of library services to satisfy the unique information needs of distance learners. The Centre for Open and Distance Learning Service Charter (2014:7) for the College of Education and External Studies has provided a long list of their client expectations. Library services are missing however, although they are listed as support services. It would be an injustice to distance learners if library services are not part of the efficient and effective provision of services that university users should expect. The new model has placed distance learning services as crucial to distance learners. This is not only from the main university library but is also linked to the proposed digital centers dedicated to distance learners and remote university and public libraries. This is among the rest of the services offered to all students and which all university users should expect and should be made aware of. Anything short of this will confirm or bring into play the academic discrimination often associated with distance learning programmes.

7.4.4 Relevant resources

According to the research findings, some of the barriers stated by respondents were the lack of relevant materials (Chapter Six, section 6.6.17). The type and range of services that distance learners could use would appear to depend on what is in stock or purposefully sourced for all users of the university. This is done without the input of distance learners since all library users are treated the same way in the delivery of library services (Chapter Six, section 6.6.12). Other barriers to relevant resources include a lack of searching skills for these learners. This means that although they can travel to the library, but on arrival they are unable to access the required materials because they are not able to successfully retrieve information or the resources they require are not available or, if available, are outdated. It was also stated that there are perennial shortages of funds for libraries to purchase new stock. Added to this, is the lack of regular user surveys to gauge the user needs of all library users, including distance learners. These situations necessitate a more innovative approach in order to satisfy the unique information needs of distance learners, given their study circumstances. The new proposed model places emphasis on the acquisition of relevant resources and stock selection which would require teamwork between library and faculty members of staff. It would also require regular user surveys in-order to gauge relevancy and currency of all library resources, including those for distance learners.

7.4.5 E-resources and online databases

Due to the circumstances and study environments of distance learners who are far removed from universities, the findings revealed that the use of the internet is a pre-requisite for distance learners (Chapter Six, section 6.7.5). Distance learners are unlikely to use traditional library services regularly because, as stated previously, their information needs are unique. These students more often than not use e-resources and other online resources and databases as available. These are therefore the most obvious sources that distance learners use to supplement their learning, reading and writing of assignments. The study's findings also revealed that the use of internet mediates the separation between lecturers and students through the use of telephones and computers, among other e-resources which make information readily accessible and easy to use. The concept of e-learning at its best performance is the ultimate solution to the distance learning student isolated and far removed from the university. The use of computers and the internet in the delivery of educational materials motivates students to explore the internet even

further thus enabling them to discover new methods of navigating and finding knowledge related to their studies and adding value to their learning. The proposed model has placed the use of e-resources on equal level with the acquisition of relevant materials. This is to demonstrate their importance and significance for distance learners' use and access to information to satisfy their information needs as a vital variable to their learning and academic advancement.

7.4.6 Staff attitudes

The findings of the study revealed a number of issues regarding staff for the purposes of improving the provision of library and information services for distance learners. Top on the agenda is library staff attitudes towards distance learners. It emerged that staff in the libraries were not aware of the unique circumstances of distance learners as library services were planned for all students (Chapter Six, section 6.6.12) regardless of the unique needs of distance learners. Moreover it was also revealed that some library staff members in the universities work under very unfavorable conditions. They lacked proper training and the status they were afforded at their universities was poor. Librarians need to be made aware of their responsibilities towards all their users, in particular distance learners. In order to change these negative attitudes, library staff need recognition, equity in remunerations, relevant training and their involvement in all projects and plans from the outset, especially those regarding academic advancement and library development. The proposed model has recognized staff issues as one of the key elements and core values that university management need to give maximum support to in order to improve staff attitudes. This will add value not only to distance learning programmes but to all university programmes as whole. A user friendly library is a must for a conducive academic environment to support teaching and learning.

7.4.7 Efficient ICT infrastructure

The study has revealed that the advent of ICTs has been embraced as a solution to the myriad of information challenges associated with the delivery of distance education programmes (Chapter Six, section 6.7). Despite the accolades, ICT has its own challenges because it is dynamic and requires regular upgrading, uninterrupted power supply, regular training for personnel, expensive hardware and software equipment. This is an expensive undertaking for the ever cash strapped universities and by extension libraries in Kenya and other parts of Africa. However this is a

necessary and essential component of university operations and it is also necessary not only for the delivery of academic programmes but also to other operations of the university. The only way forward is therefore to invest heavily in ICT. The findings of the study however revealed that the ICT investment should necessitate teamwork between various department of the university, such as the ICT department and the libraries.

Library staff as end users of some of the ICT equipment in their departments should be given an opportunity to recommend what kind of materials and equipment they require, including software that can improve the delivery of services to their users. Library staff must be involved in training when new ICT equipment and software is installed to enable the librarians to impart the relevant information searching and retrieval skills to their users. It emerged that while library automation has become a necessity in this information age, the required teaching skills are lacking in most African university libraries (Chapter Six, section 6.7.1). The new model therefore places substantial emphasis on an efficient ICT infrastructure.

7.4.8 Training of staff and learners

While an efficient ICT infrastructure is a necessity it is of no use if it is not being used for the purposes for which it was intended. It emerged that even if the well intentioned ICT infrastructure was in place saturated with a variety of e-resources and efficient, it is of no use to anyone if the intended users are not efficient or lack training for the maximum utilisation of the resources available (Chapter Six, section, 6.7.2). The research findings also established that while full-time students receive follow-up training sessions in the libraries after the initial orientation session; distance learners are deprived of this advantage due to their study circumstances. The RBL model used for this study requires that learners are equipped with hands-on exposure in order for them to understand and interact well with both human and equipment resources. This is so that they are able to channel questions and obtain feedback and participate fully in the learning environment. This student-centered approach provides learners with opportunities to become more effective users of information resources and technology, a trait central to the isolated studying characteristic of distance learners. It also emerged that library staff who should be competent in their technical skills in the use of both hardware and software; lack these skills which would enable them to make full use of the equipment available.

Without these attributes, it is not possible for library staff to train library users on user education skills, or to provide the necessary hands-on experience required by learners to be able to make use of all the e-resources available to them. The research findings indicated that library staff require the necessary skills to be able to process and organize all the library resources professionally so that they can easily be located and retrieved by users (Chapter Six, section 6.6.17). Staff need to be trained so that they are able to train library users to become skillful in their search and retrieval strategies in order to explore the resources to the maximum. This effort as mentioned earlier which is central to an efficient academic library should also be undertaken as teamwork between the library staff, members of the faculty and ICT personnel for the successful implementation, efficiency and functionality of the ICT resources. While the proposed model underscores the importance of training of staff as a good management practice, it also requires the university management to accord such training maximum support and funding in order to realize the full benefit of such training.

7.4.9 Digital centers and remote libraries

The findings of the study revealed that the proposed idea of establishing information centres and digital centres dedicated to distance learners was long overdue. These information centres are also known as information or citizens bureaus. Although modest in nature the centres are a rich source of information ranging from employment and training opportunities, sales and auctions of commodities, academic and scholarship opportunities and current daily papers as well as back issues. In the past these were simple facilities sometimes with a few books of reference and information such as postal telephone directories, city locations and addresses, a variety of catalogues, maps and tourist information among others. There were also notice boards which displayed events, exhibitions, and market days, among other items.

With the advent of ICTs however these centres could be turned into digitized centres which could store more online e-resources. This would require an efficient ICT infrastructure in place in most, if not all, rural areas as projected by the action plan in the Kenya Vision 2030. Ideally the Kenya National Library Services would be the main catalyst for such undertaking supported by the remote libraries that some universities have already or are planning at all extra mural centers across the country as revealed by the research findings (Chapter Six, section 6.6.18). The

proposed model values these centres very highly as they will have an impact on satisfying some of the information needs of distance learners. Distance learners require information as and when they need it. Given their study circumstances, studying from a distance with limited access to main stream libraries, with an excellent ICT infrastructure these digital centres would go a long way in satisfying the distance learners' information needs. The fact that they are also available in villages and remote areas and in line with power supply to all remote areas as projected by the Kenya Vision 2030, would be ideal for satisfying distance learners' information needs. Universities should also collaborate with the Kenyan Public Library Services for the successful use of the centres.

7.4.10 Distance learners

Distance learners in the context of this study were defined in Chapter One, section 1.4.3. Distance learners are students in institutions where instructors and the student are at a distance from each other and are removed by distance from centres of learning. This study preferred to use students in conventional institutions who do not live on-campus, or are not full-time students. Such students are sometimes referred to as, non-traditional students, used interchangeably with off-campus students as a definition. For the purposes of this study, it is important to point out that any student who attends part-time programmes, weekend, school-based or is attending their course at satellite campuses far removed from the main campus are technically distance learners in that they report on different dates for the library orientation, have no access to the main campus library, more or less attend lectures separately and at different times from their full-time colleagues. That is what makes their information needs unique and hence the subject of this study. The proposed model has placed the distance learners at the centre of a renewed and refocused awareness of their unique information needs. The model requires compliance by all stakeholders in terms of their responsibilities, and adherence to standards and guidance. This is to ensure that distance learners are not academically discriminated against and are provided with a library support service that supports their learning.

7.5 Recommendations

The study investigated the role of academic libraries in supporting distance education in Kenya. The study surveyed distance learning students and library staff at two universities in Kenya,

namely the University of Nairobi and the Technical University of Mombasa. The findings unearthed information relating to the research problem of the study, from the literature review, semi-structured interviews and the questionnaire. One of the research questions required an effort towards finding solutions to challenges faced by distance learners in terms of their information needs. Based on the findings from the responses to the research questions, the study has offered general recommendations aimed at providing solutions to the challenges that distance learners face in terms of accessing library and information services in Kenya. The study offered the following recommendations:

7.5.1 Standards and guidelines from the Commission for University Education

The findings of the study revealed that the regulator of university education in Kenya, the CUE, has put in place standards for academic libraries and for open and distance learning education in Kenya. However as reported in Chapter Six, the standards are technically not enforceable before the distance learning programmes are authorized or approved. The process of accreditation should be strictly observed before any distance learning programmes commence. In other words the process of accreditation should be strictly observed before any distance learning programmes are approved. This study also recommends that the library and information facilities for distance learners are also rigorously inspected among the overall university library services and approved in terms of the information needs of all students, including distance learners. The standards should also be regularly revised and updated to include any newly accredited distance learning programmes. The CUE should ensure this is observed through regular impromptu site visits. The existing standards have encouraged universities to meet minimum requirements, but as these are not mandatory, only a few universities implement the requirements fully if at all.

7.5.2 Policies and charters in universities and academic libraries

The university policies and charters need to make it explicitly clear among its academic programmes as to what is expected of the academic libraries in terms of their role of providing information services for distance learners. The university policies should include the responsibilities of academic libraries in this regard and encourage co-operation of staff, especially those in the library and ICT departments to provide efficient e-services and resources. This study recommends that the academic library's policies should include a Vision and Mission

statements which aligned to the university policies, services and the rights of distance learners. The charters should also include the expectations of not only all students or members of the university community, but also of the library services available to distance learners. The policies should also include mechanisms of ensuring or measuring their outcomes against the set goals.

7.5.3 University management support and goodwill

The study findings revealed that university management in some universities do not give maximum support and goodwill to their library departments. It has been stated that some of the major structural developments of the university such as library buildings and implementation of ICT systems for the library, can be implementation with little or no input from the deputy university librarian (Chapter Six, sections 6.6.11 and 6.6.17). The CUE standard LIBR/STD/09 that requires at least 10% of institutional operational budget to be allocated to the acquisition of information resources is routinely ignored. Even when this is implemented it can be relocated to other “deserving” departments, more often than not without reference to the librarian. The librarian is usually the last person to be employed in most universities and this usually happens after an inspection by the CUE when it emerges that the so-called library is being supervised by a clerical or semi-professional members of staff. At this point all planned programmes of the university will have been up and running. This has led to the provision of poor library services. This study recommends that the librarian should be one of the key people to be employed at the inception of any university programme and should be involved in the planning of all university infrastructures. This is especially as the library is one of the core departments that can determine the quality of academic programmes and also add value to these. While the support of management to the library should not be questionable, as mentioned earlier this study recommends that the CUE ensures that university management provides the necessary support and goodwill to the library; and that all standards and guidelines are not only observed, but also that regular visits and checks are conducted to ensure compliance.

7.5.4 Funding and budgeting

Proper and adequate funding from the government and the university through which the funds are channeled is critical to enable the implementation of constructive planning and initiatives. The main issue however is good financial management practices and ensuring that all the funds

allocated to the various departments of the university are not only managed well, but also spent for the purposes for which they were intended. This brings into play the university management, the financial office and the supplies department. It is an open secret that most universities are dogged with corruption. The university management has a role to ensure all the financial management and purchasing policies are observed. As noted in Chapter Three, section 3.3.12, the Procurement Act, which has made the purchase of university goods the preserve of the supplies department with little or no input from end users, has resulted in many sub-standard goods being purchased because of the revered 10% kickbacks popular with the supplies departments. This has resulted in the purchase of poor quality goods including ICT equipment and other library materials. The result of this is poor services to both learners and librarians as end users of the purchased products.

Any University management has the crucial role of ensuring that this grave issue is addressed and that any members of staff found embezzling funds and soliciting and receiving kickbacks are prosecuted. The main issue for management in terms of funding and budgeting is to ensure that a certain percentage of the total budgets is actually budgeted for the services of distance learners as part of the budget of the university library. It is critical that the 10% that should be allocated to the university library as per the CUE standard LIBR/STD/09 is not only observed but adhered to. Money allocated to the library should also be used for the purposes for which it was intended. Such funds allocated to the library should not be re-located or diverted to other 'deserving' departments (as has been the practice in the past), and especially without reference to the deputy university librarian. This study has noted and recommends that this crucial responsibility lies with the university management, and that CUE should monitor universities to ensure such allocations are made to the university libraries.

7.5.5 Human resources and training

Human resources are key assets in any organization however in order for staff to be able to deliver in terms of their abilities and services, they require training. The findings of the study revealed that library members of staff require adequate and relevant training so that they are able to train their users on user education skills in order for them to meet their information needs. The study findings stressed the fact that librarians require teaching skills because they are not trained

in these skills and yet they are required to teach or train their users. Training is important to enable library staff to communicate and impart information skills to their users. Funding should also be allocated for training activities. This study recommends that library staff employed are qualified for their positions and are remunerated in accordance with the rest of the academic personnel. Staff should be developed or supported with adequate regular training given the dynamic and ever changing environment of the information profession. The training outcomes should make it explicitly clear that the role of staff is for the purposes of offering exemplary services to all users regardless of their registration status. Staff should be encouraged to have a positive attitude and to become more proactive when dealing with distance learners.

7.5.6 ICT for the library

The study revealed that adequate and efficient ICT is crucial in the delivery of distance education and library services due to the study circumstances of the distance learners. It is therefore important that decisive measures are taken to ensure that an appropriate and efficient ICT infrastructure is in place. This includes standby options for power supply to cater for the frequent power outages and load shedding in Kenya and most developing countries. This study recommends that steps should be taken to supply the necessary ICT infrastructure in the library with qualified IT skilled personnel based in the library under the supervision of the deputy university librarian. The implementation of the library automated system and the subsequent training for the newly acquired IT equipment should be a joint effort and teamwork between the ICT department and staff of the library. The support and goodwill from management is crucial for the successful implementation of these ICT plans for the library.

7.5.7 Pre-planning, teamwork and cooperation

The study findings revealed that planning and pre-planning of distance learning programmes is a preserve of faculty members and that librarians are not usually adequately involved in these programmes. It is prudent that librarians are involved from the outset and throughout the process. Acquiring goods and services in any university in Kenya is a long process, especially if it involves large sums of money. It requires the tender committees to meet and go through an evaluation process until the right supplier is selected and informed, only then can the purchasing process begin and this after confirmation that funds allocated for the purpose are available. The

involvement of the library in the pre-planning phases of all courses, including distance learning programmes, will ensure that library staff can begin to compile lists of required materials and to initiate the purchasing process early enough. This is important because some of the materials required have to be sourced from overseas or require the use of agents specialized in the acquisitions process. This can be a very long and tedious process. This study recommends that librarians should be involved in the pre-planning of all course programmes as a matter of procedure from the outset. This should be a teamwork process between library staff and faculty members with management support to ensure an efficient and effective library service to distance learners.

7.5.8 Central library and remote services

The study found that the current model of delivery of most university library services emanates from the central library also known as the main campus library. In this model, services are provided from the main campus library to all users and patrons of the university accessing services from remote libraries in areas close to them or wherever they are. This model however is not always effective because distance learners do not access library and information services as and when they need it and from wherever they are for a number of reasons. Remote access is not as efficient due to poor investment in ICT, physical infrastructure and frequent power supply irregularities. Some of the university and library webpages cannot be accessed easily because of password and licensing challenges. A lack of IT skills on the part of the distance learners also impedes the process. In essence the library and information services were initially planned for full-time or for all students since as the findings revealed distance learning students' information needs were never considered during the planning of the services. This study recommends that distance learners information needs be considered on equal terms as those of full-time students in the planning and delivery of library and information services in academic libraries. The plans should also consider moving away from supplying services from a central point on the main campus library and should be decentralized. Remote satellite libraries (not just resource centres) should be established by universities in all locations or campuses. Distance learning services should be included in all these library services. The study findings also revealed that the concept of digital centres dedicated to distance learning should be given serious consideration and be established in all regions or counties of Kenya. University libraries should also work with public

librarians and develop mechanisms for complimentary services to assist distance learners. These initiatives also require management support and goodwill, especially in terms of budget allocation and human resources.

7.5.9 Proposed model at CUE

The study has proposed a new model which places emphasis on the inclusion of distance learning services as part of the overall services of university libraries in Kenya, especially where distance learning courses are offered. This model however is not an end in itself. While the model can go a long way in alleviating some of the distant learning information needs, it is also intended to be interrogated by other stakeholders and adapted to suit the particular context. The study recommends that the CUE should consider adopting some of the attributes of the model to implement new standards for university libraries in Kenya, taking into consideration distance learners information needs.

7.5.10 Interlibrary loan services and collaboration with other information providers

According to the research findings there is some modicum of interlibrary loan (ILL) services in the academic libraries studied. It was however deemed insignificant by some library staff as users were not really aware of the service. The first step would therefore be to promote the service (where available) through user education and aggressive marketing. Moreover, it is very important that librarians work together in Kenya as happens internationally; collaborating and adopting the strategy of co-operative resource-sharing given the constraints of limited funding. Joint ventures in the supply, of information with other information providers and relevant stakeholders (including the private sector) can assist in improving library services. This study recommends that ILL and collaboration between all library and information providers be reinforced for the benefit of all library users.

7.5.11 Publicity and awareness, evaluation and assessments

One of the crucial findings of the study was the absence or lack of regular evaluation and assessments of library and information services by users and a lack of awareness of their availability. The lack of publicity and awareness of services available (especially to distance learners) has also largely contributed to underutilization of the resources. Results revealed that

librarians have not done as much as they should have. In this regard, lack of motivation and scarce funding have been cited as reasons by librarians. Needs assessment and evaluation of services outcomes against the set objectives is crucial in the delivery of services, not only for distance learners but to all library users as a whole. They should therefore be done regularly and should be included in the library policies and guidelines, students' handbooks and all library publicity materials and leaflets. Publicity and awareness is vital in updating library users on the availability of services and resources hence promoting their use should be extended to the entire university community and all relevant stakeholders for their support. This undertaking is the responsibility of the deputy university librarian and/or the library staff. This study recommends that quarterly reports showing efforts made towards publicity, awareness, evaluation and assessments should be made to a senior member of the university management, that is the Vice Chancellor, Academic Affairs and should be shared with the library advisory committee.

7.5.12 The distance learning librarian

The study results indicated that there are no distance learning positions such as distance learning librarian in the institutions that were investigated. The findings of the study also revealed that in the developed world this is a standard position, especially in universities and colleges offering distance learning programmes. Distance learning in Kenya has been embraced by both the government as an economic empowerment enabling activity and one of the fundamental pillars towards achieving the much touted Vision 2030, as well as the private sector employees who make up most of the part-time, evening, weekend and distant learners. The distance learning sector must therefore be properly supported by government and universities. This study recommends that library and information studies schools in universities should start training information experts who can satisfy the unique information needs of distance learners. This training will then produce the required professionals who are able to integrate with the growing lucrative distance learning market. This market has hitherto been treated only as an income generating mechanism by most universities with casual or minimum attention to standards and quality.

7.5.13 Professional associations' roles

The study findings revealed that in the developed world, professional associations are crucial in the development and consistency of maintaining standards for the information needs of distance learners in institutions that offer distance learning programmes. As mentioned in Chapter Six (sections 6.6.5 and 6.7.2), such associations for example the ALA, CLA and ACRL, have the responsibility of keeping a close check and ensuring that all learners benefit from all the facilities, support and assistance without discrimination. Such organizations review guidelines and standards regularly in order to maintain quality assurance and also to the entitlement principles enshrined in the Bill of Rights in the USA. The synopsis of all this is that librarians and information professionals affiliated to those associations are very vocal in their deliberations. This has resulted in the development and adaption of official guidelines and standards for provision of library and information services for distance learners. The equivalent of these associations in Kenya are the Kenya Library Association and the Kenya Library Information Services Consortium, among others. These associations meet regularly to deliberate on issues related to library and information services. There is evidence that some of the professionals from these associations and organizations are occasionally called upon by the CUE to offer their expertise with regard to guidelines and standards in university libraries in Kenya (CHE 2012:2). Such experts have a rich source of experience that should be consulted regularly, not only occasionally or as and when required by the CUE. This study therefore recommends that the CUE seriously consider co-opting these professionals from these associations and incorporate them into the quality assurance department or committee as a strategy to utilize their talents.

7.5.14 Extending service hours

One of the main services libraries are known for traditionally is the loaning of library materials and resources. It has been standard procedure to loan out especially printed materials such as books, periodicals and similar resources. With the advent of ICT as the catalyst for distant education, stakeholders needed to begin to think of re-inventing the ways in which libraries operate in the context of new and innovative ways of assisting all users to have access to ICTs. With poverty prevalent among some students and scarce funding for libraries, the few PCs or laptops available (when possible) in libraries are inefficient for all users who may wish to have or require the use of a laptop. This study recommends that university libraries in Kenya as a

matter of policy remain open at all times; for access to especially distance learners who usually have more time during weekends, public holidays and at night. It is also recommended that universities and libraries seriously consider a loan facility for laptops and tablets which can be used in the library or even borrowed on very stringent conditions. In this context loan conditions for distance learners be relaxed or extended to suit their information needs.

7.5.15 Distance learning student representation at management level

As a matter of policy, most universities have or should have student representatives in the various committees of the university to represent students' needs and well-being at the university. This is usually done so that the student community is involved in running the university affairs. This enables student voices to be heard at the highest level and also assists management in solving some of the new and existing challenges associated with student needs. It may be that a distance learner may be elected or nominated to some of these committees to represent the distant student community. However as revealed by the findings, more often than not the student representative will be from the full-time body of students who are usually involved in most if not all activities of the university. This study therefore recommends that a distance learning representative be nominated or elected to the university academic board or library advisory committee to represent the interests and information needs of distance learners in universities which offer distance learning programmes.

7.5.16 Revisiting definitions and policies

The findings revealed that policies, guidelines and standards are crucial in the delivery of quality distance learning programmes. It is or should be standard practice that there are some policies and guidelines that give direction to the provision and delivery of distance programmes. However given some of the findings and the promise of distance learning as a social and economic development medium it may be prudent to re-examine some of the guidelines and policies that have been in operation. This would assist to re-define distance learning clearly for all stakeholders and the university fraternity (to locate distance learning in the universities and commitment thereof), as well as its importance in society as an economic development initiative. In this regard, distance learning policies must be clear with effective implementation and monitoring of evaluation plans. This study recommends that distance learning policies should

include visions, mission statements, and the role of the library and its mandate in providing efficient services to adequately meet distance learners' information needs. There should be specific goals and outcomes within the institutional frameworks; clear responsibilities; monitoring and evaluation plans; budgets and clear financial implications and timelines; with the co-operation of all faculties and the support of university management.

7.5.17 Corporate organizations input

During the course of this study, it emerged that most distance learning students are those employed in corporate organizations and the private sector. These are professional people who seek to improve and gain professional skills for their potential promotions and/or job relocations. Some of these distance learning students are actually sponsored by their organizations for their various courses, with the expectation that on graduation their training will impact on their organization's work ethics. There has been some progress made in the commitment of funding from these corporate or private sector organizations to some of the university sectors. However this is not sufficient and a lot more can be done in accessing the rich financial base of the corporate and private sector. This would include joint ventures and research to solicit support for the various university programmes in terms of funding and sponsorships for distance learning.

7.5.18 The Open University of Kenya and open and distance learning librarianship

During the literature review, it emerged that the concept of distance learning was initiated in Bath, England when Pitman began teaching shorthand by correspondence in the 1840s (Anyona, 2011). Since then, the concept has evolved into large entities resulting in several distance and open learning institutions setup exclusively for the purposes of open and distance learning education, namely in England, they have the Open University (OU); in South Africa the University of South Africa (UNISA); and in Tanzania, the Open University of Tanzania. In Kenya the concept of the Open University has been considered for an extended period. With a ready market for such programmes, this study recommends that the Open University of Kenya be fast tracked as one of the much touted Vision 2030 pillars of education. Apart from bringing in new innovative ideas, guidelines and standards for distance education in Kenya; this would be a huge potential investment and could impact on the social and economic development of the country.

7.6 Suggestions for future studies

This study is not an end in itself. It is an addition and contribution to the body of knowledge that already exists (albeit in a small way) as confirmed by Kavulya (2004) with regard to the dearth of literature on the subject. Since research is an ongoing activity, this contribution is intended to stimulate debate, interrogate and encourage further research, especially in the following areas:

7.6.1 Distance learning through e-learning studies

ICT has been embraced as the catalyst that is needed in the delivery of distance learning programmes as it allows easy access and communication in the remotest parts of the country. The results presented and research findings confirmed that e-learning can be of immense benefit to distance learners, in terms of delivery and access to their learning materials and information relevant to their studies and academic advancement. The suggested digital centres dedicated for distance learners is a novel idea and can be explored further to include online daily newspapers and vacancies among others. This would keep rural communities informed on current affairs and save them trips to urban centres for even the very basic of information needs. While it is evident that some universities in Kenya are already practicing e-learning, this study suggests that further in-depth and comprehensive studies are necessary to address the full exploitation and potential of this concept in the delivery of distance learning programmes.

7.6.2 Information studies and librarianship at the grassroots

Research findings confirmed that some students are not aware of the importance of libraries and indeed can finish their programmes without ever visiting the library. It is therefore important to have model library systems established from the grassroots starting with primary and high schools. Further research on the RBL model would help identify how independent studying, critiquing and thinking can complement lives not only as an informed society but also properly prepare students for their future as learning is a lifelong or continuing process. Therefore studies on the role of libraries in promoting lifelong learning should be undertaken in the Kenyan context.

7.6.3 The role of university management in supporting libraries

One of the highlights of the study is the apparent lack of vital and ongoing support from university management in support of the library. The results and findings have confirmed that there is indeed lack of support to some extent; several reasons have been offered for this. These reasons range from passivity on the part of librarians to routine non-adherence to some CUE standards, such as the spending of 10% of the university budget for information materials as stated by LIBR/STD/09. In order to curb this, this study suggests further research on the role of university management in supporting the library and the library staff members, not only for distance learning programmes, but all university programmes.

7.6.4 Studies on what constitutes an effective distance learning course

The study has found gaps with regard to distance learning programmes in universities in Kenya. There is need therefore to conduct further studies on what constitutes an effective distance learning programme, how decisions regarding the implementation of distance learning programmes are made, who validates such decisions, the accreditation processes and to address any doubts on the quality of the programmes and the role of CUE in all these processes.

7.6.5 Further studies on the proposed model of distance education

As mentioned in Section 7.6, views from this study are intended to stimulate debate, interrogate the suggestions and recommendations and open-up the subject or topic for further research by other experts and stakeholders. There is therefore need to interrogate the proposed model (Figure 7.1) for distance education and distance learners' information needs in Kenya. This is in not only to offer constructive criticism but also contribute other models that could be adopted. There is also a need to seriously consider and include in librarianship curriculum or information studies syllabi an element of distance learning librarianship as one of the modules in the course given the findings of this study. CUE can continue to play its critical role by offering a distance learning information needs model to be followed by all universities and colleges which offer distance learning programmes and to ensure compliance with the models' attributes.

7.7 Conclusions and summary

This section presents the conclusion and summary of the study's main findings. This is based on the research questions and responses that systematically addressed all the issues raised by the study in relation to the reviewed literature and the conceptual framework that guided the study. The main objective of the study was to investigate the provision of library services to distance learners in Kenya, their needs, challenges and solutions on how to overcome these challenges. The discussions of the findings revealed valuable information and recommendations which, if addressed, can contribute positively in supporting the unique information needs of distance learners.

7.7.1 Conclusion

The study successfully investigated the research problem, namely to establish the role of the academic libraries in supporting distance education in Kenya. The study findings revealed that there are important issues that need to be addressed with some urgency to change the disparity in the provision of library and information services for distance learners; which has led to doubts about the quality of distance learning education or their degrees in relation to their full-time colleagues. The study has revealed some gaps which need to be addressed in order to improve the efforts already in place given that distance learning education is here to stay and has many benefits for the working masses of Kenya as well as Kenya's, economy among others. The study looked at current practices in the delivery of distance education and the information needs of distance learners for their academic learning and advancement. The study found these wanting in certain areas, especially in the supply of information to the unique needs of distance learners, the involvement of librarians in the pre-planning of distance learning programmes, financial support and goodwill from university management and the implementation of the CUE guidelines and standards, especially by university libraries.

The study also established that distance education is seemingly not given equal support as other university programmes, especially those that require accreditation and or authority from the CUE before they can be implemented. Indeed in some institutions such programmes are referred to as 'cash cows' in that they are implemented for the sole purposes of generating income, given their sometimes relaxed flexible admission requirements. The study also established the various

barriers and challenges to satisfying the information needs of distance learners and has recommended solutions to overcome the challenges for all stakeholders to consider or adopt to improve support to distance learning programmes. The study has proved the assumption that due to their study circumstance, distance learners' needs are unique and require a different dispensation from those of full-time students. Further the provision of library and information services for distance learners should be tailored to meet their information needs. It has already been stated that this study is not an end in itself but rather an attempt to highlight and draw attention to the current practices and improve on the best management practices that can be adapted. Finally, it is hoped that this study provides an impetus to other scholars for further research on library support to distance education and constructive criticism on this vital sector of education, not only in Kenya but also in other parts of Africa.

7.7.2 Final summary

This chapter provided a summary of the findings, conclusions and recommendations of the study that investigated the role of academic libraries in supporting distance education in Kenya. The study was conducted at the University of Nairobi and the Technical University of Mombasa in Kenya. A mixed study approach was used and the study adapted the RBL model, using both a questionnaire and semi-structured interviews. As a result, the findings based on the five designated research questions provided insightful findings to improve the role of the library in satisfying the information needs of distance learners in Kenya. The findings revealed a number of gaps and challenges for which recommendations and solutions were also offered. The study has contributed to a new body of knowledge in proposing a new model, among other recommendations, and new management practices to better understand not only the concept and intricacies of distance education but also the provision of library and information services to meet the unique information needs of distance learners. As a conclusion, further research was suggested in some areas related to the topic and constructive criticism for the study was also encouraged. This would assist to critique distance education and the provision of academic library resources to distance learners, so that the libraries quality of service and standards in supporting distance learners can be improved, not only in Kenya but also in Africa and other parts of the developing world.

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APPENDICES

Appendix 1: Informed consent letter



26 March 2012

Dear Respondent

Informed Consent Letter

Researcher: Lucas Kilemba

Institution: University of KwaZulu-Natal

Telephone number: +27 (0) 826946656
+254 (0) 700506636

E-mail address: lkilemba@yahoo.com
212562437@stu.ukzn.ac.za

Supervisor: Dr Ruth Hoskins

Institution: University of KwaZulu-Natal

Telephone number: + 27 (0) 33-260 5093

E-mail address: hoskinsr@ukzn.ac.za

HSSREC Research Office: Ms P Ximba

Institution: University of KwaZulu- Natal

Telephone number: +27 (0) 31 260 3587

E-mail address: ximbap@ukzn.ac.za

I, Lucas Kilemba doctoral student of the University of KwaZulu-Natal, kindly invite you to participate in the research project entitled “*The role of academic libraries in supporting distance education in Kenya*”.

This research project is undertaken as part of the requirements of the PhD, which is undertaken through the University of KwaZulu-Natal, Information Studies Programme.

DECLARATION OF CONSENT

The aim of this study is to investigating the support offered by academic libraries in Kenya to distance learners. Please be informed that the questionnaire will take about 20 minutes of your and the scheduled interview will take about one hour.

Participation in this research project is voluntary. You may refuse to participate or withdraw from the research project at any stage and for any reason without any form of disadvantage. There will be no monetary gain from participating in this research project. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Information Studies Programme, at the University of KwaZulu-Natal.

If you have any questions or concerns about participating in this study, please feel free to contact myself or my supervisor at the numbers or addresses indicated above.

I wish to take this opportunity to thank you in advance for participating in this research project.

Lucas Kilemba

27 March 2013

Signature

Date

I hereby consent to participate in the above study.

Name: Date: Signature:

Appendix 2: Semi structured interview guide for deputy university librarian

Dear Respondent,

I am a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, South Africa. I am investigating the role of academic libraries in supporting distance education in Kenya.

I will be extremely grateful if you could assist me in this endeavour by answering the following questions. It will take you approximately 30-50 minutes to complete the interview. Your responses will be kept anonymous and confidentiality is guaranteed.

Please answer the following questions as honestly as possible.

1. Name of your University.....
2. Position
3. Highest qualification held.....
4. Number of years in the current position.....
5. How long have you worked in the library.....
6. Is the library involved in pre-planning for distance learning programmes? Yes () No ()

Please explain your answer

7. Are there any library guidelines and policies relating to library service provision to distance students? Yes () No ()
8. Does the library provide services for distance students? Yes () No ()
9. If, Yes, please describe the services offered.

10. Does the library have a budget for providing information services for distance students? Yes () No ()

Please explain your answer.

11. Is the library given sufficient support from the universities management to provide and efficient and effective service to distance students? Yes () No ()

Please explain your answer.

12. Are library staff provided with training to deal with distance students? Yes () No ()

Please explain your answer.

13. What is your opinion of the idea of establishing information centres/digital libraries in Kenya dedicated to distance learning?

14. Do you have any current or future plans to support distance students? Yes () No ()

Please explain your answer.

15. Do you collaborate with any other libraries or information service providers to provide services to distance students? Yes () No ()

16. If Yes, please describe such collaborative efforts.

17. What is your opinion are the main challenges in providing library services distance students?

18. What strategies can be adopted by the library to overcome these challenges?

19. What additional comments or suggestions do you have regarding the provision of library services to distance students?

THANK YOU FOR YOUR TIME AND COOPERATION

Appendix 3: Semi-structured interview schedule for subject/reference librarian

Dear Respondent,

I am a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, South Africa. I am investigating the role of academic libraries in supporting distance education in Kenya.

I will be extremely grateful if you could assist me in this endeavour by answering the following questions. It will take you approximately 30-40 to complete the interview. Your responses will be kept anonymous and confidentiality is guaranteed.

Please answer the following questions as honestly as possible.

1. Name of your University.....
2. Position
3. Highest qualification held
4. Number of years in the current position.....
5. How long have you worked in the library?.....
6. Are librarians involved in the pre-planning for distance programmes at you university?

Yes (...) No (...)

Please explain your answer.

7. Does the library provide services for distance students? Yes () No ()
8. If Yes, please list the services provided too distance students.

9. If No, please explain why not

10. Does the library evaluate the needs of its users regularly? Yes () No ()
11. Does the library evaluate the needs of distance students regularly? Yes () No ()
12. If Yes, how are such evaluations conducted? Please explain

13. If No, please explain why not.

14. What do you think are the most appropriate methods to support distance students information needs?

15. Does your library have campus libraries, or satellite libraries that cater for the needs of distance students? Yes () No ()

16. In your opinion does you library have sufficient printed (books, journals, etc.) resources to support distance learning? Yes () No ()

17. If No, please explain why not.

18. In your opinion does you library have sufficient electronic (e-books, e-journals, online databases, etc.) resources to support distance learning? Yes () No ()

19. If No, please explain why not.

20. In your opinion does you library have sufficient staff (librarians, library assistants.) to support distance learning? Yes () No ()

21. If No, please explain why not.

22. In your opinion do you think the ICT infrastructure of your libraries is adequate to support distance learning? Yes () No ()

23. If No, please explain why not.

24. Does your library have a website? Yes () No ()

25. If Yes, does the library provide online resources (OPAC, online databases, etc.) to distance students? Yes () No (...)

Please explain your answer.

26. Does your library provide user education for distance students? Yes () No ()

Please explain your answer.

27. Do you collaborate with any other libraries or information service providers to provide services to distance students? Yes () No ()

28. If Yes, please describe such collaborative efforts.

29. What is your opinion are the main challenges in providing library services distance students?

30. What strategies can be adopted by the library to overcome these challenges?

31. What additional comments or suggestions do you have regarding the provision of library services to distance students?

THANK YOU FOR YOUR TIME AND COOPERATION

Appendix 4: Questionnaire for distance learning students

Dear Respondent,

I am a PhD student in the Information Studies Programme at the University of KwaZulu-Natal, South Africa. I am investigating the role of academic libraries in supporting distance education in Kenya.

I will be extremely grateful if you could assist me in this endeavour by answering the following questions. It will take you approximately 20 minutes to complete the questionnaire. Your responses will be kept anonymous and confidentiality is guaranteed.

Please indicate with a cross (X) or a tick (✓) your responses to the following questions. In some cases you will have to write your response in the spaces provided.

A. BACKGROUND INFORMATION

1. Gender

☐ Male
☐ Female

2. Age range

<input type="checkbox"/> 21-25	<input type="checkbox"/> 41-45
<input type="checkbox"/> 26-30	<input type="checkbox"/> 46-50
<input type="checkbox"/> 31-35	<input type="checkbox"/> 51-55
<input type="checkbox"/> 36-40	<input type="checkbox"/> over 56

3. Name of institution?

☐ University of Nairobi
☐ Technical University of Mombasa

4. Programme of study?

☐ Diploma
☐ First degree
☐ Masters degree
☐ MPhil/PhD
☐ Others (Please specify)

5. Year of study?

☐ First
☐ Second
☐ Third
☐ Fourth
☐ Other (Please specify) _____

6. Where do you live?

☐ In a city
☐ In a town
☐ In a village

7. For what reasons would you require and seek information?(Tick all that apply)

- ☐ To write assignments
- ☐ To prepare for lectures
- ☐ To study and prepare for tests
- ☐ To study and prepare for exams
- ☐ Other (Please specify)

B. MODE OF DELIVERY (MODULES)

8. How do you receive your lectures/lessons as a distance learner? (Tick all that apply)

- ☐ Contact sessions at main campus
 - ☐ Contact sessions at distance campus
 - ☐ Through the module/study guide
 - ☐ Online/WebCT
 - ☐ Other (Please specify)
-

9. Would you consider the modules/study guides or online packages received from your institution sufficient to adequately meet your needs?

10. What other sources do you use to meet your information needs?(Tick all that apply)

- ☐ Internet
 - ☐ Radio
 - ☐ Telephone
 - ☐ Lecturer
 - ☐ E-mail
 - ☐ Course coordinator
 - ☐ Colleagues
 - ☐ Library resources
 - ☐ Other (Please specify)
-
-

C. INFORMATION SEEKING

11. As a distance learner, what is your most preferred information format?

- ☐ Print
- ☐ Electronic
- ☐ Audio-visual

12. Which of the following information source have you used in the last year? (Tick all that apply)

- ☐ Radio
- ☐ Television
- ☐ Module/study guides
- ☐ Books
- ☐ Journals

- ☐ Newspaper
 - ☐ Reference sources
 - ☐ Online catalogue
 - ☐ Government publications
 - ☐ Microfiche/Microfilm
 - ☐ Internet
 - ☐ E-mail
 - ☐ Online databases
 - ☐ Subject/Reference librarians
 - ☐ Lecturers
 - ☐ Tutors
 - ☐ Interlibrary loans
 - ☐ Other (Please specify)
-
-

13. Which of the following do you consider your most important information source?

- ☐ Module/study guides
 - ☐ WebCT
 - ☐ Tutors
 - ☐ Internet
 - ☐ Friends and colleagues
 - ☐ Books
 - ☐ Lecturers
 - ☐ Library
 - ☐ Other (Please specify)
-

14. How do you seek or obtain information needed to prepare your assignments, for a test or examination? (Tick all that apply)

- ☐ Through direct supply by post from my institution's library
 - ☐ Through other collaborating library and information centres
 - ☐ Through online or electronic supply
 - ☐ Personal travel to institution's library
 - ☐ I buy my own materials
 - ☐ I ask for help from knowledgeable people
 - ☐ Other (Please specify)
-
-

E. LIBRARY INFORMATION SERVICES

15. Do you use a library to meet your information needs?

- ☐ Yes
- ☐ No

16. Does your institution provide you with an adequate library and information service?

17. How do you receive library and information support services? (Tick all that apply)

- ☐ Through direct supply by post from my institution's library
- ☐ Through other collaborating library and information centres
 - ☐ Through Online or electronic supply
 - ☐ Personal travel to institution's library
- ☐ I buy my own materials
 - ☐ I ask for help from knowledgeable people
 - ☐ Other (Please specify) _____

18. Which other institutional libraries do you use? (Tick all that apply)

- ☐ Main campus library
- ☐ Public (branch) library
- ☐ Own campus library
- ☐ Other (Please specify) _____

19. Who arranged the use of the library for you?

- ☐ My membership is automatic
- ☐ My institution
- ☐ I did
- ☐ Other (Please specify) _____

20. Do you pay for your membership or service obtained from the library?

- ☐ Yes
- ☐ No

21. Do you have access to your university library website?

- ☐ Yes (please go to Q.24)
- ☐ No (please go to Q.25)

22. How often do you access the website?

- ☐ regularly
- ☐ Once a week
- ☐ Twice a month
- ☐ Once a month
- ☐ once in three months
- ☐ Never
- ☐ Other (Please specify) _____

23. How do you contact your library/subject librarian? (Tick all that apply)

- ☐ I use dedicated free telephone number
- ☐ I send e-mail
- ☐ I do not contact the library or any subject librarian
- ☐ I post letters
- ☐ Through facsimile
- ☐ I visit the library/subject librarian in person
- ☐ I leave messages on telephone answering machines
- ☐ I send a SMS with my cell phone

___ Other (please specify)

24. Did your institution provide you with training on information use (literacy) skills?

___ Yes (please go to Q.27)

___ No (please go to Q.28)

25. How did you receive the training? (Tick all that apply)

___ By E-learning mode

___ Through the module

___ Through face-to-face teaching during orientation

___ Through tutoring during residential sessions

___ Other (please specify)

26. Which of the following library and information sources/services are available to you (Tick all that apply)

___ Books

___ Journals

___ Newspaper

___ Reference sources

___ Online catalogue

___ Government publications

___ Microfiche/Microfilm

___ Internet

___ Photocopying machines

___ Online databases

___ Subject/Reference librarians

___ Interlibrary loans

___ Other (Please specify)

27. Which of the following library and information sources/services do you think might be useful for you?(Tick all that apply)

___ Books

___ Journals

___ Newspaper

___ Reference sources

___ Online catalogue

___ Government publications

___ Microfiche/Microfilm

___ Internet

___ Photocopying machines

___ Online databases

___ Subject/Reference librarians

- ☐ Interlibrary loans
☐ Other (Please specify)
-
-

28. Are you aware of all the library and information services your library can offer you as a distance learner?

29. What library and information services have you used in the past year? (Tick all that apply)

- ☐ Books
☐ Journals
☐ Newspaper
☐ Reference sources
☐ Online catalogue
☐ Government publications
☐ Microfiche/Microfilm
☐ Internet
☐ Photocopying machines
☐ Online databases
☐ Subject/Reference librarians
☐ Interlibrary loans
☐ Other (Please specify)
-
-

30. Are all your information needs adequately met by the library resources available to you?

- ☐ All of my information needs are met
☐ Most of my information needs are met
☐ Some of my information needs are met
☐ None of my information needs are met
☐ Other (Please specify)
-
-

31. What problems or difficulties do you experience with accessing library resources?

32. What should be done to prevent such problems or difficulties?

F. USE OF INFORMATION AND COMMUNICATION TECHNOLOGY

33. Did you receive any training on the use of computers?

☐ Yes

☐ No

34. How did you receive the training?

☐ At my place of work

☐ Through a module

☐ During residential sessions

☐ I arrange my training on my own

☐ Other (Please specify)

35. How would you rate your level of computer skills before starting your distance learning programme?

☐ Poor

☐ Fair

☐ Good

☐ Excellent

36. What is your level of computer skills now?

☐ Poor

☐ Fair

☐ Good

☐ Excellent

37. Do you use the internet or any electronic database to supplement your reading and writing of your assignments?

☐ Yes

☐ No

38. Who pays the cost of using the internet?

☐ My institution

☐ My employer

☐ My family/myself

☐ Other (Please specify)

G. BARRIERS AND HINDRANCES

39. How far do you have to travel to get to the main campus university library or information centre to meet your information needs?

☐ 1-10 kilometers

☐ 11-30 kilometers

☐ 31-50 kilometers

☐ 51-100 kilometers

☐ 101-300 kilometers

☐ 301-500 kilometers

☐ 501 kilometers and above

40. What is the source of electricity in the area you live in?(Tick all that apply)

- ☐ Permanent electricity supply
 - ☐ Battery power
 - ☐ Cylinder gas
 - ☐ Candles/paraffin lamps
 - ☐ Other (Please specify)
-

41. What are your home study circumstances?

- ☐ Practically impossible
- ☐ Fairly difficult
- ☐ Convenient
- ☐ Good
- ☐ Excellent

42. What are your challenges with regard to your distance learning programme? (Tick all that apply)

- ☐ How to get materials to write my assignments, read for tests and exams
 - ☐ How to get time to study
 - ☐ How to best plan my time
 - ☐ How to get a suitable/conducive place to study
 - ☐ How to cope with examinations
 - ☐ Other (Please specify)
-

43. What barriers affect your use of information sources? (Tick all that apply)

- ☐ Lack of time
 - ☐ Lack of useful materials
 - ☐ Isolation
 - ☐ Lack of a well-equipped library
 - ☐ Lack of equipment and costs
 - ☐ Lack of technical skills
 - ☐ Other (Please specify)
-
-

44. How do you think these barriers can be overcome?

45. Do you have any additional comments or suggestions?

THANK YOU FOR YOUR PARTICIPATION AND COOPERATION

Appendix 5: Permission to undertake research (TUM)



22 September

2013

The Vice Chancellor,
Technical University of Mombasa,

Dear Sir/Madam,

RE: PERMISSION TO UNDERTAKE RESEARCH FOR MR L.M.KILEMBA (212562437)

I am writing on behalf of Lucas M. Kilemba, a Doctoral Student in Information Studies in the School of Social Sciences at the University of KwaZulu-Natal, republic of South Africa. He is investigating the support offered by academic libraries in Kenya to distance learners, evening and part-time students. He has selected to do his research at Technical University of Mombasa and the University of Nairobi, Centre for Open and Distance Learning in Kenya.

Mr Kilemba has successfully presented and defended his proposal for his study at the School of Social Sciences Development Cluster Committee on 27th May 2013. His proposal is now with the Higher Degrees Committee awaiting Ethical Clearance. In terms of scientific merit and validity his study will examine the role of academic libraries in supporting distance learning in Kenya. The study will not only help fill gaps in studies on the topic but will also help improve distance learning systems in the country. It will benefit and offer an insight to distance and part time learning programmes not only in Kenya but also in other parts of Africa. It will high light barriers and obstacles which distance and part time learners face and provide solutions to such on-going programmes in regard to library and information services, contribute to e-Learning as solutions to such programmes and initiate Information Centres dedicated to distance and part time learners. The study will also assist academic librarians to better understand distance and part time learner's needs and challenges they face and how to solve them. Mr. Kilemba is very collegial and has developed good relations with the other Doctoral, Masters Students and staff in the Information Studies Programme. He is very hard working and has developed a strong proposal. He has also assisted and supported other Doctoral and Masters Students with their proposal writing exercise.

Mr. Kilemba will interview selected academic librarians and hand out questionnaires to selected students between May-June 2014.

I would be most grateful if you could assist him.

Yours sincerely

Dr. Ruth Hoskins (Supervisor)

hoskinsr@ukzn.ac.za

+27 (0) 33 2605093

Appendix 6: Permission to undertake research (UoN)



22 September 2013

Office of the DVC (Research, Production and Extension),
University of Nairobi, Kenya

Dear Sir/Madam,

RE: PERMISSION TO UNDERTAKE RESEARCH FOR MR L.M.KILEMBA (212562437)

I am writing on behalf of Lucas M. Kilemba, a Doctoral Student in Information Studies in the School of Social Sciences at the University of KwaZulu-Natal, republic of South Africa. He is investigating the support offered by academic libraries in Kenya to distance learners, evening and part-time students. He has selected to do his research at Technical University of Mombasa and the University of Nairobi, Centre for Open and Distance Learning in Kenya.

Mr. Kilemba has successfully presented and defended his proposal for his study at the School of Social Sciences Development Cluster Committee on 27th May 2013. His proposal is now with the Higher Degrees Committee awaiting Ethical Clearance. In terms of scientific merit and validity his study will examine the role of academic libraries in supporting distance learning in Kenya. The study will not only help fill gaps in studies on the topic but will also help improve distance learning systems in the country. It will benefit and offer an insight to distance and part time learning programmes not only in Kenya but also in other parts of Africa. It will high light barriers and obstacles which distance and part time learners face and provide solutions to such on-going programmes in regard to library and information services, contribute to e-Learning as solutions to such programmes and initiate Information Centres dedicated to distance and part time learners. The study will also assist academic librarians to better understand distance and part time learner's needs and challenges they face and how to solve them. Mr. Kilemba is very collegial and has developed good relations with the other Doctoral, Masters Students and staff in the Information Studies Programme. He is very hard working and has developed a strong proposal. He has also assisted and supported other Doctoral and Masters Students with their proposal writing exercise.

Mr. Kilemba will interview selected academic librarians and hand out questionnaires to selected students between May-June 2014.

I would be most grateful if you could assist him.

Yours sincerely

Dr. Ruth Hoskins (Supervisor)

hoskinsr@ukzn.ac.za

+27 (0) 33 2605093

Appendix 7: Permission to undertake research granted (TUM)



Technical University of Mombasa Office of the Vice Chancellor

All enquiries must be addressed to the Vice Chancellor

When replying please quote: 11000061(129)

Date: 26th September, 2013

Lucas M Kilemba
PhD Research Candidate
Information Studies Programme
University of KwaZulu-Natal
Pietermaritzberg, South Africa

Dear Mr. Kilemba

RE: PERMISSION TO UNDERTAKE RESEARCH AT TUM

Refer to your email dated 23rd September, 2013 requesting for permission to undertake your research at Technical University of Mombasa.

This is to permit you to carry out your research at this institution. However, you should also write to the University of Nairobi requesting for permission to undertake research work.

Thank you.

Yours sincerely


Prof. Josphat K Z Mwatelah
VICE CHANCELLOR

Tom Mboya Avenue P.O. Box 90420-80100 Mombasa, Kenya
Tel: (254)41-2492222/3/4,2490571 Fax: (254) 41-2495632, Mobile (254) 0724 955377/0733 955377
Email: vc@tum.ac.ke, Website: <http://www.mombasapoly.ac.ke>

Appendix 8: Permission to undertake research granted (UoN)



UNIVERSITY OF NAIROBI OFFICE OF THE DEPUTY VICE - CHANCELLOR

(Research, Production & Extension)

Prof. Lucy W. Irungu B.Sc., M.Sc., Ph.D.

P.O. Box 30197-GPO,
00100, Nairobi-Kenya
Telephone: +254-20-2315416 (DI), 318262

Fax: 0202317251
Email: dvrpe@uonbi.ac.ke

Our Ref: UON/RPE/3/5/Vol.XI/212

July 28, 2014

Lucas M. Kilemba
PhD Research Candidate
Information Studies Programme
University of KwaZulu-Natal
Pietermaritzberg,
South Africa


Dear Kilemba,

PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF NAIROBI

I refer to your request dated July 28, 2014 to conduct research at the University of Nairobi entitled: **"The Role of Academic Libraries in Supporting Distance Education in Kenya"** for the award of Doctor of Philosophy degree from the University of KwaZulu-Natal, is hereby approved w.e.f. July 30, 2014 up to and including August 30, 2014.

You are however required to share the findings of your study with the University of Nairobi by depositing a copy of your research findings with the Director, Library & Information Services on completion of your study.

Please note that this letter supersedes our earlier communication dated **October 9, 2013, Ref: UON/RPE/3/5.**


LUCY W. IRUNGU
DEPUTY VICE-CHANCELLOR
(RESEARCH, PRODUCTION AND EXTENSION)
&
PROFESSOR OF ENTOMOLOGY

c.c. Vice-Chancellor
DVC, A&F
DVC, AA
DVC, SA
Director, CODL
Director, Library & Information Services



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Appendix 9: Certificate of ethical approval NACOSTI

NACOSTI ACCREDITED



PU-ERC/PhD/002/2014

ETHICS REVIEW COMMITTEE
ACCREDITED BY THE NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY
AND INNOVATION (NACOSTI, KENYA)

CERTIFICATE OF ETHICAL APPROVAL

THIS IS TO CERTIFY THAT THE PROPOSAL SUBMITTED BY:
Mr. Lucas Matata KILEMBA

REFERENCE NO:
ERC/PhD/002/2014

ENTITLED:
The Role of Academic Libraries in Supporting Distance Education in Kenya

TO BE UNDERTAKEN AT:
University of Nairobi and Technical University of Mombasa, Kenya

FOR THE PROPOSED PERIOD OF RESEARCH
HAS BEEN **APPROVED** BY THE ETHICS REVIEW COMMITTEE
AT ITS SITTING HELD AT PWANI UNIVERSITY, KENYA
ON THE 30th DAY OF JANUARY 2014

CHAIRMAN

SECRETARY

LAY MEMBER



*Pwani University, www.puc.ac.ke, email: r.thomas@pwaniuniversity.ac.ke, tell: 0719 182218.
The ERC. Giving Integrity to Research for Sustainable Development*

PTO

Appendix 10: UKZN ethical clearance



4 December 2013

Mr Lucas Matata Kilemba 212562437
School of Social Sciences
Pietermaritzburg Campus

Dear Mr Kilemba

Protocol reference number: HSS/1398/013D

Project title: The role of academic libraries in supporting distance education in Kenya

Full Approval – Expedited

This letter serves to notify you that your application in connection with the above has now been granted **Full Approval**

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project; Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study. PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

Best wishes for the successful completion of your research protocol

Yours faithfully

Dr Shenuka Singh (Chair)
Humanities & Social Science Research Ethics Committee

/pm

cc Supervisor: Dr Ruth Hoskins
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cc School Admin: Ms Nancy Mudau

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