

**THE STATUS AND CHALLENGES OF OPEN AND DISTANCE  
LEARNING IN KENYA'S PUBLIC UNIVERSITIES**

**By**

**Jackline K. Anyona**

**A THESIS SUBMITTED TO THE SCHOOL OF EDUCATION  
IN FULFILLMENT OF THE REQUIREMENTS FOR THE  
DEGREE OF DOCTOR OF PHILOSOPHY IN PLANNING AND  
ECONOMICS OF EDUCATION OF KENYATTA UNIVERSITY**

**October, 2009**

## DECLARATION

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

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Anyona Jackline Kwamboka

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Date

E83/10676/2006

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

---

Prof. Frederick Q. Gravenir

---

Date

Department of Educational Management, Policy and Curriculum Studies,  
Kenyatta University.

---

Prof. Godfrey S. Mse

---

Date

Department of Educational Management, Policy and Curriculum Studies,  
Kenyatta University.

## **DEDICATION**

To my husband Andrew and my children Ivy, Nicole and Cole for their moral and spiritual support. They have been a source of inspiration and encouragement, and to God who has made everything possible.

## **ACKNOWLEDGEMENTS**

My sincere gratitude goes to both my mentors: Prof. F. Q. Gravenir and Prof. G. S. Mse for taking their valuable time to guide me throughout this study. Their critical evaluation of this work has been invaluable. I sincerely thank the staff and students of Open and Distance Learning of Kenyatta University and University of Nairobi, for providing me with the information I used in this study. Without their support, this study could not have been possible. I would also like to recognize the support of Dr. John Orodho who gave invaluable advice on methodologies. In the same regard, I also recognize the following people whose contribution was vital in the development of this thesis: Prof. J. Odumbe, Prof. P. Owino and Mr. C. Thuku. I appreciate the support of students and staff of the Department of Educational Management, Policy and Curriculum Studies, Kenyatta University who in one way or another facilitated my work.

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**ACRONYMS AND ABBREVIATIONS**

ACDE	-	African Council for Distance Education
AMREF	-	African Medical Research Foundation
AVU	-	Africa Virtual University
BYUIS	-	Brigham Young University Independent Study
CHE	-	Commission for Higher Education
CoL	-	Commonwealth of Learning
EFA	-	Education for All
ERS	-	Economic Recovery Strategy
OHDET	-	Occupational Health Distance Education Training
GDP	-	Gross Domestic Product
KIE	-	Kenya Institute of Education
KISE	-	Kenya Institute of Special Education
MDGs	-	Millennium Development Goals
NCA	-	North Central Association
NEA	-	National Education Association
NGO	-	Non-Governmental Organization
ODL	-	Open and Distance Learning
RIDL	-	Regional and International Distance Learning
UCEA	-	University Continuing Education Association
UNISA	-	University of South Africa
USA	-	United States of America

## ABSTRACT

The ever increasing demand for university education, overstretched residential facilities and the need for continued learning have led to the emergence of Open and Distance Learning (ODL) in Kenya. These ODL programmes have however been faced with challenges which this study sought to identify. The focus of this study was on ODL delivery models in Kenya, training and motivation of staff, cost and consistency of the programmes delivery across geographical locations, learner's interaction with facilitators and feedback. Descriptive survey design was adopted in this study. University of Nairobi and Kenyatta University were purposively selected for the study. Random sampling was used to select respondents who included the students registered in ODL, lecturers and senior administrators involved. Data were collected through 702 questionnaires for students, 278 questionnaires for lecturers, 2 interview schedules for administrators, and document analysis. Content validity of the instruments was done before the instruments were pre-tested and reliability calculated using split-half technique for internal consistency. The data were analyzed both qualitatively and quantitatively. Quantitatively the data was analyzed using descriptive statistics aided by statistical package for social sciences (SPSS) and Microsoft excel. Results indicated that Kenya was in the early stages of developing ODL and at the time of the study, the programmes were offered through various institutions which initially started by offering residential modes. Various challenges touching on non optimal utilization of programme facilities, delays in production of study materials, inadequate funding, and low teaching staff levels were identified. Efforts of the ODL providers in Kenya were also not guided by national policies posing a challenge on resource mobilization and programme quality issues. These institutions, being dual mode were overwhelmed and were not able to meet demand for university education. The study thus established that the institutions offering ODL in Kenya are governed by their own institutional policies and that ODL delivery in Kenya is faced with various challenges that hinder its full implementation. It is hoped that the findings of this study and the recommendations therefore suggested would aid the government and universities in Kenya to achieve their goal of providing quality open and distance education at an affordable cost. It would aid in policy on the establishment of a national open university to cater for increased demand for university education, budgetary provision for ODL programmes, the articulation of national policies for open and distance education and efficient use of ODL resource centers in providing student support services.

## CHAPTER ONE

### INTRODUCTION

#### **1.1 Background to the Study**

Higher education is facing a critical challenge to meet new demands for the 21st century. Those seeking access to education at all levels; primary, secondary, and tertiary is on the increase but in spite of this, educational institutions are not expanding fast enough to accommodate the increasing number of students seeking access to higher education through the residential mode. Alternative ways of providing access to higher education via distance learning need to be fully explored. Open and distance education makes it possible for students anywhere and who are eligible to enrol in higher education courses.

Open and distance education could be used to make it possible for secondary school graduates, only a fraction of whom can be accommodated tertiary institutions, to enrol directly, and without leaving their homes, in colleges and universities around the world. This form of education offers several advantages over the traditional educational system, including; virtual access to teaching staff in higher institutions around the world; introduction of new interactive pedagogical techniques (more hands-on learning opportunities, independent research, less reliance on rote memorization); and, the creation of virtual

institutions and linkages where resources could be shared by people and organizations in physically unconnected places.

Open and distance learning appears to offer an option for students seeking university education but who are not able to secure admission into the competitive residential mode of education. Distance learning can provide instructionally effective, highly interactive learning experiences that are flexible, equitable, and responsive to individual needs (Rogers, 1995). Studies show that distance learning is more cost-effective than traditional programmes, especially with large student enrolments and a good support system for students. Unit costs per student are below those of residential programmes (Rogers, Ibid).

The promise of Information Communication Technology (ICT) is great. ICT is expected to serve as a catalyst to all communities, allowing them to profit from and contribute to an increasingly globalized society. Emerging ICT holds much promise for breaking down traditional barriers that have limited higher education. Today, through distance learning strategies and computer applications, we can expand the content, extend the reach, and increase the effectiveness of existing academic programmes. Through emerging communication technology, effective computer-delivered coursework could be developed while at the same time improving access to scientific and technical information.

All learners, regardless of their educational levels, deserve nothing less than a quality education and training that would provide them with opportunities for lifelong learning and meaningful participation in the world of work and society as productive citizens. Therefore, any education and training system should develop policies that respond to the equity and development challenges that are critical to improving the quality of life of all people. With specific reference to higher education, the principle of equity requires fair opportunities for learners both to enter higher education programmes and to succeed in them. According to the South African National Plan for Higher Education (2001), it is unacceptable for graduates in general and those from previously disadvantaged communities in particular, to be denied the provision of high quality programmes, as it would not only negatively impact on their ability to improve their own life chances, but would also adversely impact on the broader agenda for social and economic development. Although the South African National Plan for Higher Education has been cited as an example, the principles it espouses could apply equally to higher education institutions throughout the world. Consequently, higher education institutions, irrespective of the country of origin, must be able to create a learning environment that offers learners the opportunity to advance, develop and enrich themselves, both intellectually and materially.

Open and distance learning provides study opportunities for those who cannot or do not want to take part in classroom teaching at a particular institution on a full-

time basis (Holmberg, 1995). In its earliest form, open and distance learning meant study by correspondence. As new technologies developed, distance instruction was delivered through such media as audiotape, videotape, radio and television broadcasting and satellite transmission. Micro-computers, the internet and the worldwide web are shaping the current generation of distance learning, and virtual reality, artificial intelligence, and knowledge systems may be next. According to Kerka (1996), some define distance learning as the use of print or electronic communications media to deliver instruction when teachers and learners are separated in place and/or time. However, others emphasize distance learning over education, defining it as getting people - and often video images of people - into the same electronic space so they can help one another learn (Filipczak, 1995) or a system and process that connects learners with distributed resources (Filipczak, Ibid). These two definitions imply learner centeredness and control. Typical audiences for earlier generations of distance learning were adults often seeking advanced education and training at home, on-the-job, or in the military. Their multiple responsibilities or physical circumstances prevented attendance at a traditional institution (Bates, 2000). Now anyone is potentially a distance learner, a concept that has implications for the organization of educational institutions, and for teaching and learning.

While for some, distance learning is identical to private study of prescribed texts with or without special study guides, for others, it is a teaching/learning system

including specially prepared study materials and regular, mediated contacts between students and tutors, individually or in groups. There are distance teaching universities that offer their students printed and recorded course materials with mediated communication, sometimes providing supplementary face-to-face teaching. This applies, for example, to the Dutch Open University and the Colombian Open University. Others, like the British Open University, provide not only for course materials, but also for correspondence, telephone and computer communication between students and tutors (Holmberg, 1995). This use of pre-produced course materials and non-contiguous communication, sometimes supplemented by face-to-face contacts, represents the practice of most distance-teaching institutions in the world. A term that is often used to describe the mode of delivery provided by distance learning institutions is flexible learning, which, according to Moore (2000) is not a specific methodology. It is an approach to teaching and learning that is open to the possible use of a variety of innovative learning practices and combinations of practices. Ideally, it provides the learner with a choice of learning strategies, as well as the choice of place, pace and time. In this sense, it is an extension of the concept of open learning. Whatever the nature and mode of delivery, open and distance learning has several challenges for learners and providers, particularly with regard to practice pertaining to quality education and training, and policy.

With the advent of the new communication revolution, the world is witnessing an expansion in open and distance learning. The new information revolution has

enabled academic institutions to provide a flexible and more open learning environment for students. The convergence of new information technologies such as telecommunications, computers, satellites, and fiber optic technologies is making it easier for institutions to implement distance education (Harasim, 1993) and according to Rahm and Reed (1998), indications are that distance education in higher education would continue to grow.

The earliest form of distance learning simply involved people reading what scholars had written on a variety of topics, and was almost exclusively the preserve of the upper classes. Gutenberg's invention of the printing press was perhaps the earliest example of technology revolutionizing distance education (Cartwright, 1994). In the space of a few decades programmes and materials were available through the radio and television network which greatly reduced the barrier of distance. The development of microwave and satellite technologies greatly expanded radio and television coverage allowing signals to be broadcast further, to more locations, at reduced cost compared to terrestrial systems.

Distance learning methodologies have come into prominence during the last decades of the 20th century. The need for continuous learning and unprecedented technological innovation in communications has pushed distance learning approaches to the forefront of educational practice. However, there are challenges that have come with the advent of new technologies, new programme demands, new audiences, and new commercially competitive providers. These developments

present challenges for educators to explore the open and distance learning options available. The idea is to provide information that would explain and anticipate distance learning practices for a broad range of emerging educational purposes and experiences.

### **1.1.2 Open and Distance Learning in Kenya**

The first government policy to address open higher education was the Act of Parliament of 1966, which established the Board of Adult Education. Since independence, however, a number of commissions and reports have highlighted ODL as an alternative mode of education provision. For example, the Ominde Commission of 1964/65 recommended the establishment of an advisory commission on ODL; the Gachathi Report of 1976 emphasized the need for solving educational problems in large scale by diversifying education to include ODL; the Mackay Report of 1981, the Kamunge Report of 1988 and the Koech Report of 2000 included the use of ODL in their recommendations. The latest government initiative as contained in Sessional Paper No. 1 of 2005 recommended the establishment of an open university and use of ODL in human resource development at all levels.

The practice of ODL in the country has been at all levels of education and provided by different institutions governed by their own institutional policies. Some of the major providers include: the Kenya Institute of Education (KIE);

University of Nairobi; the Kenya Institute of Special Education (KISE); Kenyatta University; African Medical Research Foundation (AMREF); Ministry of Health; Ministry of Agriculture; Ministry of Education under school based teacher development programme; and a number of cross border institutions. In addition, there are other institutions hosted in this country that provide and manage distance learning. For example, the African Virtual University (AVU) which used to run programmes in Francophone and Anglophone Africa but has since changed its mandate from providing distance learning directly to the learners to providing training to staff in institutions offering open and distance learning. According to Juma (2003), this uncoordinated ODL practice has made some impact on education and development in the training of adult literacy teachers; primary school teachers; training of teachers in special education; cooperative practitioners; training of medical professionals; and primary school enrichment through the radio programmes and use of electronic modes.

While distance learning holds promise, a number of obstacles would have to be addressed before it can be fully utilized in Africa. There are a number of resource and technological constraints that hinder distance learning. Telephone and other communication infrastructures outside of major cities remain inadequate. These challenges are inspite of a policy document by the Government of Kenya on ODL that is yet to be implemented (Republic of Kenya, 2006).

## **1.2 Statement of the Problem**

Education is a basic human right and the Government of Kenya has the responsibility to provide it to all its citizens. However, the achievement made at primary level following the introduction of free primary education in 2003 is already putting pressure at secondary and tertiary levels, therefore jeopardizing the government's effort to meet the Education for All (EFA), one of the Millennium Development Goals' (MDG) targets. The waiver of tuition fees in secondary education is definitely going to increase the pressure on demand for university education which is already experiencing problems of overstretched facilities, overcrowding in the institutions and high learner-lecturer ratios.

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

fact that this mode of education is recommended in the country's education policy, it has not been fully exploited. Efforts by providers of ODL in Kenya have been faced with various challenges thus the need for a study to find out the status of open and distance learning in Kenya's public universities, analyze its challenges and establish policy options that could be responsive to the challenges.

### **1.3 Purpose of the Study**

The purpose of this study was to establish the status and analyze the challenges of open and distance learning in Kenya's public universities.

### **1.4 Specific Objectives**

The specific objectives of the study were to:

- i. find out the main models of open and distance learning in Kenya;
- ii. establish access and equity in ODL delivery in Kenya
- iii. establish the adequacy and appropriateness of resources used in ODL programmes delivery;
- iv. propose appropriate strategies in overcoming challenges of ODL in Kenya.

### **1.5 Study Questions**

This study was undertaken to provide information on the following questions:

- i. What are the main models of ODL programmes organization and delivery?
- ii. What is the admission criteria into ODL programmes?

- iii. How equitable is ODL programme delivery across geographical locations?
- iv. What is the ODL programme staffing in Kenya?
- v. How sufficient is ODL programmes funding?
- vi. What are the resources used in ODL?
- vii. How cost effective are ODL programmes in Kenya?
- viii. What are the levels of satisfaction of ODL participants?

In addressing these questions, data were collected and the significant theoretical developments and contributions to the study of distance education in Kenya and elsewhere reviewed.

### **1.6 Significance of the Study**

The outcome of this study would lead to greater understanding of the status of open and distance learning in Kenya. It would also lead to enhanced assessment of the country's higher education structures and the economic realities associated with open and distance learning. Greater information for policy debates on significant issues associated with open and distance learning for higher education students and the public regarding access, equity, and quality would be brought to light. It is expected that the study findings would draw light into possibilities of collaboration across universities throughout the nation and region in the development and implementation of open and distance learning policies and programmes.

### **1.7 Assumptions of the Study**

This study was undertaken on the following assumptions:

- Demand for higher education would continue to rise while resources for residential university education would not rise as fast, thus the need for ODL programmes,
- The universities in Kenya would have capacity to provide ODL programmes to the majority who do not get access to residential programmes thus increase access.

### **1.8 Limitations of the Study**

The study had the following limitations:

The study was only carried out in two public universities, University of Nairobi and Kenyatta University. Universities both private and public offer some degree of open learning and do differ in terms of administration and their operations thus the study results may not adequately represent their experiences.

### **1.9 Scope of the Study**

The study was delimited to two public universities with major components of open and distance learning in Kenya, the University of Nairobi and Kenyatta University.

### **1.10 Theoretical Framework**

The theoretical framework guiding this study was based on demand and supply theory which was first used by James Denham-Steuart in his inquiry into the

Principles of Political Economy (1776). Examples of factors that bring about change in demand other than change in price are change in fashion and tastes, change in income and change in population (Saleemi, 1981). On the supply side, factors other than price that bring change in supply are change in population and change in budget.

The other theory that influences demand and supply of education is the Human Capital theory, which states that, education is an investment that produces benefits in the future. Thus, increase in education spending will increase future national income and vice versa. Studies on the private and social rates of return to education indicate that incomes increase with the level of education and that the implied private and social rates of return to higher education are high (Psacharopoulos, 1973).

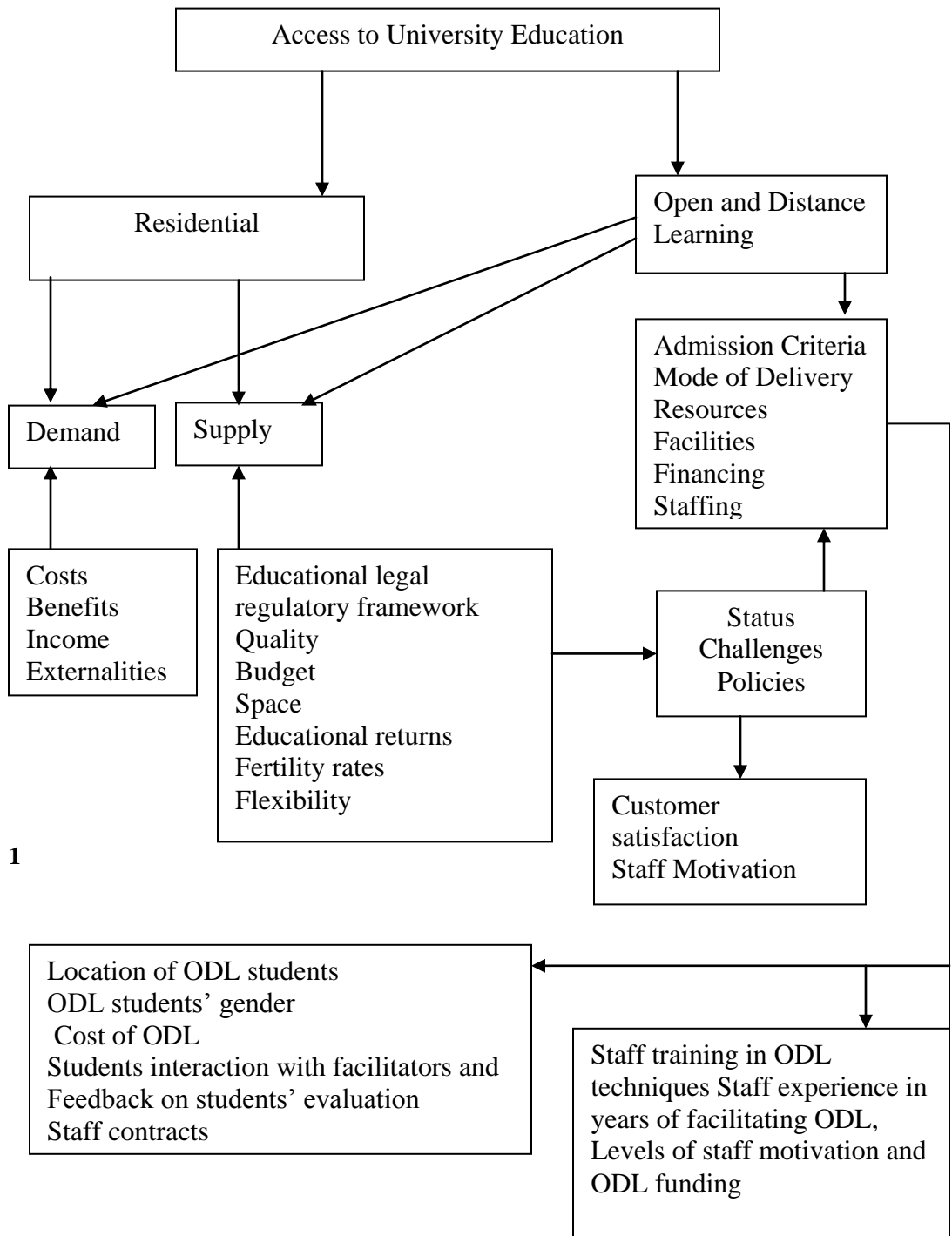
### **1.11 Conceptual Framework**

High demand for opportunities at the university level is reflected in the growth of open and distance learning provision. The underlying principles of the framework (figure 1.1) provide a base for understanding the role of open and distance learning in the provision of university education. In the framework, space, policies, budget and returns regulate supply by limiting provision to a few who can be accommodated in the universities' facilities. However, demand still remains high due to the accrued benefits, income and externalities. Despite this demand, the

opportunities open to the consumers in the residential mode of education remain narrow due to inadequate facilities caused by budgetary constraints facing universities in Africa and Kenya in particular. This demand could be offset by open and distance learning provision since the programmes do not require the universities to invest in entirely new plants. This study sought to establish the status and challenges of open and distance learning programmes in Kenya's public universities. These are determined by, among other things, the admission criteria, mode of delivery, availability of resources, facilities and finance, and the levels of staffing.

The conceptual framework below therefore, attempts to determine the effects of staff training in ODL techniques, and programmes funding on their levels of motivation on the one hand and the effects of location of ODL students, their gender, cost of ODL, students interaction with facilitators and evaluations feedback on the students levels of satisfaction on the other hand. What the model indicates is that successful provision of the open and distance learning programmes are directly influenced by policies, status and challenges that face them. The conceptual framework is as represented in figure 1.1.

**Figure 1. 1: The Status and Challenges of Open and Distance Learning in Kenya’s Public Universities**



### 1.12 Definition of Significant Terms

**Access:** Access assumes availability of opportunities of university education for all those who are eligible and meet the desired criteria of opportunity to attend university education in Kenya.

**Distance Learning:** Use of print or electronic communications media to deliver university instruction when teachers and learners are separated in place and/or time.

**E Learning:** Use of electronic media to deliver university instruction.

**Face to Face Interaction:** When university instruction is delivered with the tutor present in a classroom setting.

**Higher Education:** Refers to post-secondary formal education.

**Open Learning:** An attempt to remove barriers associated with residential university education in terms of admission requirements; pace, place and time of study; subject combinations; mode of delivery, assessment and examination process.

**Open and Distance Learning:** the acquisition of university education through mediated information and instruction, encompassing all technologies and other forms of learning at a distance

- Policies:** Policies are deliberate plans of action to guide decisions on open and distance learning in order to achieve rational outcomes.
- Public Universities:** Universities that are run by the government and do rely on public funds.
- Rates of Return:** This refers to the net financial benefits accruing from university education. Private rates are gains to the individual while social rates are the gains that accrue to the society.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In this chapter, an overview of the evolution and challenges of open and distance learning in the world is given. Trends in academic, technology and economic challenges of distance education in the world and in Africa are also discussed.

#### **2.2 Evolution of Distance Learning**

Distance learning started as early as the first century AD when St. Paul used his letters or epistles to the young churches around the Mediterranean. This was a powerful form of distance learning as can be judged by the substantial growth of the Christian Church. St. Paul's epistles are, because they continue to be read today, among the most successful applications of distance learning in history.

The next phase in the history of ODL started with the age of printing and posting. An Englishman, Isaac Pitman, is credited as an early pioneer. He began teaching shorthand by correspondence in Bath, England in 1840. Students were instructed to copy short passages of the Bible and return them for grading via the "new" post system.

In the United States of America (USA), several activities in adult education preceded the organization of ODL. In 1873, Anna Ticknor started the society to encourage studies at home for the purpose of providing educational opportunities for women, which provided correspondence instruction to 10,000 members over a 24-year period. American University level ODL began in 1874 at Connecticut, Wesleyan University where bachelors and graduate degrees could be obtained in absentia. One of the first universities to deliver distance learning in an organized manner was Pennsylvania State University, which established its first distance learning network in 1886 using the US mail to communicate with its distributed students. Subsequently, a number of universities in the United States of America embraced distance learning as a mode of delivery. The first US Open University was New York State's Empire State College, which commenced operations in 1971.

The establishment of the British Open University in the United Kingdom in the year 1969, marked the beginning of the use of technology through well-designed courses. According to Harry, Keegan and Magnus (1993), the British Open University which is acknowledged as the most innovative university in the world has played a major role in the development of much of the important research in distance learning. The success of the British Open University was the major reason for the development of open universities in other countries such as USA, Japan, India, China and Turkey. Today, China is the world leader in ODL not only by the

volume of its activity, but also its diversity with over two million students, in the Open University of China alone.

The past 100 years have seen phenomenal growth in avenues of information development and dissemination. The earliest form of distance education simply involved people reading what scholars had written on a variety of topics, and was almost exclusively the preserve of the upper classes, who could afford both the time away from survival-oriented tasks, and the cost of individually hand-crafted manuscripts.

According to Sherry (1994), Gutenberg's invention of the printing press was perhaps the earliest example of technology revolutionizing distance education. The written word could now be mass-produced with relative efficiency. Coupled with the emergence of international postal services, correspondence courses began to appear through the latter half of the nineteenth century and up to the middle of the twentieth century. A much larger segment of society had access to the thoughts and ideas of their fellow men (as opposed to women, who have remained marginalized throughout much of recorded history).

The next great advance was radio. In the space of a few decades, programmes and materials were available which greatly reduced the barrier of distance. Much more revolutionary was the advent of instructional television. Technology seemed to have provided a mechanism to duplicate the classroom setting, in a medium, which

could be sent right into the learner's home. But both of these technologies had significant drawbacks. First, they were one-way mediums of communication. The learner remained essentially enrolled in a correspondence course, but with some useful supplemental materials. Second, the broadcasts were only available 'live' (Sherry, 1994).

With the development of phonographs, audio and videotapes, and xerographic equipment, all of these course materials could be duplicated with relative ease. Production costs declined, more varied course schedules could be accommodated, and review of materials became common. In addition, with the widespread availability of telephone communications in some parts of the world, distance learners and educators finally began to be able to provide fairly rapid feedback and communication (Douglas, 1993).

The development of microwave and satellite technologies greatly expanded radio and television coverage. Signals could be broadcast further, to more locations, at reduced cost compared to terrestrial systems. In the past few years, as the cost of reception equipment declined, and the variety of programmes available increased, there has been a significant increase in television-based distance education courses. But this remained a one-way means of communication. Critics complained that distance education programmes were merely a passive transmission of academic information (Cartwright, 1994).

The big change needed was interaction starting with two-way communication between the learner and the instructor. Joan Fulton put forth five fundamentals of an effective programme as: contact between the student and the instructor, active learning through writing out answers, timely feedback to the instructor on students' comprehension, timely feedback to students on work done, opportunity for students to make revisions to work done and learn from their mistakes (Fulton, 1992).

Four of these require timely bi-directional communication. Communicating by mail was increasingly unsatisfactory. Telephone and conference calls helped a great deal, but remained awkward and expensive. It is also not feasible for the instructor to communicate with every learner in this manner. Fax machines took up some of the burden, especially easing administrative tasks. As computer networks expand, electronic mail is beginning to take hold as the principal alternative for communication between learners and instructors, and among learners themselves. This is a rapid and inexpensive method of communication, and it is flexible enough to accommodate both individual and group communication (DeLoughry, 1994).

One of the biggest movements currently is the provision and expansion of two-way video communication, whether through satellites or communication networks. Most of these are an expansion from the one-many to include the many-one paradigm. The instructor can see the students, and the students can see and

respond to the instructor. This sort of 'full presence' system is becoming the minimum standard required for such distance education programmes (Fugel, 1995). The past few years have even brought technologies such as auto-tracking cameras, zoom lenses, and other devices which permit the instructor to move around during the class (Shields, 1995).

Satellites continue to be the favoured medium, but as coaxial and fiber-optic cables spread to more locations, this is starting to change. Fiber, especially, has the capacity to handle multi-directional full-motion video (Douglas, 1993). A contributing factor recently has been the sharp rise in satellite costs. The problem is here now, but the cable system alternatives have been installed in only limited areas. Institutions are also finding it increasingly difficult to maintain awareness of the changing technological fields, and to make long-term purchasing decisions (Day, 1994).

As an example, many providers have failed to update their satellite technology and find themselves unable to incorporate new advances from signal compression to analog-to-digital conversion. The need for the latter is increasingly apparent, as new technologies evolving with the computer age permit the encoding and transmission of a variety of data formats through everything from telephone lines to satellite links (DeLoughry, 1995).

One probable future direction would be the leasing of cable services from local service suppliers such as telephone or cable television corporations. This would reduce the burden on the institution for making market decisions, and for handling maintenance and upgrades. It would also position them more effectively for the emerging global electronic information environment.

### **2.3 Distance Learning in Africa**

Prior to the emergence of distance learning providers in Africa, many African students obtained various qualifications through distance learning providers in Europe and North America. One of the oldest distance education universities that emerged in the African continent is the University of South Africa (UNISA), which has been offering correspondence courses since 1946. UNISA's success has, as a result, spurred the establishment of other ODL providers in the African continent. Examples of these are the open universities in Nigeria, Tanzania and Zimbabwe, which started out as providers of residential programmes and have now diversified into providing ODL as well (Juma, 2003).

It is significant to note that some organizations are providing assistance to African countries in mainstreaming of ODL into their educational systems. Major among these are: the Commonwealth of Learning (COL) which is helping governments and institutions to use techniques of distance learning in the achievement of the Millennium Development Goals (MDGs). It is also assisting in the area of capacity building. It should also be recognized that the African Council for

Distance Education (ACDE) that was established in the year 2005 with its headquarters in Kenya, is expected to play a significant role in the development of ODL in Africa.

The number of virtual online universities has been growing and would continue to grow over the next few years. If this approach to educational development is used judiciously, it would open up new frontiers to learning by enriching collaborative research among African universities and between universities in Africa and other parts of the world. It would also promote cross-national, multi-disciplinary perspectives in educational practice, and thereby equip students, teaching staff, and administrators with tools and resources that would enable them to successfully engage the academic world of the 21st century.

Distance learning techniques are increasingly being employed by a growing number of higher education institutions in Africa. While most of the on-going distance education initiatives on the continent have been used to upgrade the quality of basic education (Association for the Development of Education in Africa, 1999), some countries are taking bold initiatives in piloting Internet-based and satellite-linked distance educational programmes in selected courses. The University of Abidjan and the African Virtual University are good examples.

While a number of African universities have established distance education departments, the delivery platform to date has been text and correspondence-

based, supported by print material. Some of the institutions are beginning to explore the use of the Internet, video conferencing, and other forms of multimedia (Association for the Development of Education in Africa, 1999). For example, the Telesun programme in Cameroon uses Internet-based courses in its science programme. The OHDET programme links Benin and three other countries with McGill University in Canada. The RIDL programme in Djibouti provides teacher training from French universities (Association for the Development of Education in Africa, 1999). Currently, four institutions in South Africa provide distance education courses: Technikon South Africa, Technical College of South Africa, Vista University, and the University of South Africa (UNISA), the oldest mega-university. Its distance education programme to off-campus students was started in 1946, with an enrolment of over 130,000 in 1995 (Wiechers, 1995). This represents over one-third of all university enrolments in South Africa. These schools enrol over 225,000 students annually (Butcher, 1998).

The most ambitious distance education initiative on the continent to date is the African Virtual University (AVU) Project. This is the first satellite-based attempt to harness the power of information technologies to deliver university education in the disciplines of science and engineering, non-credit/continuing education programmes, and remedial instruction to students in Sub-Saharan Africa. According to Darkwa and Mazibuko (2000), it represents the essential instruments for sharing resources at affordable prices to large numbers of people. The AVU project would deliver instructional programmes, strengthen the capacity in African

partner institutions, implement a network infrastructure, and implement a digital library programme (Darkwa and Mazibuko 2000). About five Anglophone and five Francophone African countries are participating in the initial pilot phase. The project would be extended to other African countries during the third and final phase.

### **2.3.1 Methods of Delivery**

Various delivery methods and technologies have been employed in distance education, including correspondence courses; television; audio, video, and computer conferencing; radio; web-based computer technologies; and, satellite-based technologies (Dixon, 1996). For example, University of South Africa uses print material, audiocassettes, and community radio; the African virtual university is based on a satellite delivery system, supplemented by video and print material. In Africa, the use of one-way radio to deliver educational material is widespread. Countries with a fairly sophisticated information infrastructure already in place such as South Africa, Zimbabwe, and Senegal have been experimenting with more advanced technologies such as two-way video and computer conferencing on a pilot scale. Some countries entering the distance education arena have used less expensive delivery platforms such as audio, prerecorded instructional television, and educational broadcasting.

While distance education holds promises, a number of obstacles would have to be addressed before it can be fully utilized in Africa. There are a number of technological constraints that hinder distance education. Telephone and other

communication infrastructures outside of major cities remain inadequate. Connectivity beyond major capital cities poses a potential problem in creating a national distance education strategy. Even though Africa has about 12% of the world's population, it includes only 2% of the global telephone network with over half of the lines in cities (Ani, 1994). Telephone density is less than two lines per 1,000 inhabitants, compared with 48 per 1,000 in Asia, 280 per 1,000 in America, 314 per 1,000 in Europe, and 520 per 1,000 in high-income countries.

#### **2.4 Open and Distance Learning in Kenya**

The first government policy to address distance higher education was the Act of Parliament of 1966, which established the Board of Adult Education. The Kamunge Report of 1988, expressed satisfaction that the External Degree Programme offered by the University of Nairobi as an example of a successful Alternative and Continuing Education Programme that could be nationally accessed by eligible learners throughout the country. It also recommended that facilities for printing and recording of educational materials at the College of Adult and Distance Education be updated and expanded to cope with the growing demand for adult education through distance teaching (Republic of Kenya, 1988). The initiation of the Faculty of Distance Education in the 1960s was majorly due to the fact that the need for high level manpower was greatest felt due to responsibilities created soon after independence. The first recommendation for the

establishment of the first degree by external studies, University of Nairobi was made in the Kenya Education Commission Report (Republic of Kenya, 1985).

With the continued demand for university education, the increasing number of candidates who meet the requirements and the inability of the internal departments, the government through the University of Nairobi sought to look into the possibility of setting up external degree studies programme. This was followed by appointment of a task force committee on 21<sup>st</sup> June, 1983 by the University of Nairobi deans committee. The task force submitted a report in August the same year which provided details on the structure, courses to be offered, medium of instruction and support services, and financial requirements and the administration of the programme. The objectives of the external degree programme were to provide: learning opportunities for the qualified Kenyans who cannot secure places in the existing internal faculties of the national universities; an alternative and innovative method of learning which is not limited to a particular time and space. An opportunity for people to learn at their own pace; the much needed high level manpower; and an opportunity to maximize the use of limited educational resources both human and material by making university education available beyond lecture halls in Kenya.

The Mungai Report of 1995 on its part recommended that the establishment of an open university similar to the ones operating in Britain, Hong Kong and Tanzania

be considered as a way of extending university education to as many Kenyans as possible. The report, however, cautioned against basing the Open University on the current restrictive system practised in the public universities. It was of the view that it should be based on innovative strategies aimed at meeting the needs of as many Kenyans as possible that desire university education. The public universities were asked to establish short courses for purposes of skills improvement and a source of generating income (Juma, 2003).

The Koech Report (1999) hailed the external degree programme of the University of Nairobi as being particularly beneficial to serving teachers and other Kenyans in employment that would otherwise not have been able to enrol for university education on a full time basis. It recommended that the programmes be expanded in order to reach many deserving and qualified Kenyans. It also hailed parallel degree programmes that have helped individuals who had otherwise been barred from public university admission (Republic of Kenya, 1999).

Despite these recommendations by the important policy documents, distance education programmes remain tiny components of higher education and government involvement is quite minimal. Among the various distance education degree programmes currently being implemented by most of the Kenyan public universities, the External Bachelor of Education Degree Programme offered by the University of Nairobi was designed and implemented to meet the needs of distance

learning (Juma, 2003). The course, which is under the auspices of the College of Adult and Distance Education, Faculty of External Degree Studies, was launched in the mid-1980s with financial support from the British Council. As expected the development, production and dissemination of distance learning materials requires adequate resources if the full potential of the various media used is to be realized (Juma, 2003). The preparation of good quality, self-instructional materials for distance learners can be difficult and at times, time consuming, if they have to be pedagogically sound. The course programmes and students materials for this particular programme, however, seem to have been so successful that the college of Adult and Distance Education has had to reprint them for use in a number of distance education programmes in the Eastern and Southern African region.

According to Juma, 2003, the Bachelor of Education distance degree programme was designed to last 6 years and was open to the then 'A' level candidates with particular preference to teachers and teacher trainers who held a teaching diploma and the teaching certificate holders. At the beginning the programme admitted around 600 students of whom close to 450 students were able to graduate, which considerably was quite successful considering the high attrition rate in some distance learning programmes.

The programme is divided into three levels with each level having two semesters of six months. Printed material, each covering unit content equivalent to forty-five

one-hour lectures is provided. A minimum of 70 hours is needed by the student to study each unit. Support services include face-to-face teaching, audiocassettes; library services other teaching/learning materials, which include identified key textbooks in each unit. Face to face teaching and learning include residential sessions for orientation, tutoring and counselling at the study centres (Juma, 2003). The College of Adult and Distance Education decided to use its provincial extra-mural centres as study centres. They currently provide facilities for learning and for individual and group tutoring and academic guidance and counseling. They also serve the basic function for information provision.

In addition, Kenya had 2 African Virtual University sites located in Kenyatta and Egerton Universities. The African Virtual University (AVU) started in 1997 with the pilot phase. During the pilot phase AVU sites received courses transmitted via satellites such as introduction to programming, introduction to engineering, computer organization and architecture, introduction to Internet, among others transmitted via satellite from universities in Canada, Europe and the United States of America (Juma, 2001). This was set up to increase access to tertiary and continuing education in Africa by reaching a large number of students and professionals in multiple sites simultaneously; improve the quality of education by tapping the best African and global academic resources, and by offering training and coaching to academics in African universities to prepare teaching materials for delivery through the AVU network ; and contribute to bridging the digital divide

by improving connectivity in AVU learning centres and host universities and by providing training in engineering, computer science, information technology and business (Juma, 2001). Their objective has however changed from providing training directly to students through their sites to providing the much needed training of staff in open and distance education.

### **2.5 Challenges of Distance Learning**

The current higher education infrastructure cannot accommodate the growing college-aged population and enrollments, making more distance education programs necessary. Callahan (2003) notes that the largest high school class in U.S. history would occur in 2009. In corroboration of this projection, a survey conducted by the US Department of Education, National Center for Education Statistics predicted that college enrolment would grow 16% over the next ten years (Jones, 2003). Reeve and Perlich, in projecting similar growth rates for the state of Utah, added that because college and university attendance are not restricted to the ‘traditional’ age group, this presents only a partial measurement of the projected demand for higher education” (Reeve & Perlich, 2002). With this growth in college-age population and enrolments and the need for more lifelong learning for adults, many institutions acknowledge that within the decade there would be more students than their facilities could accommodate (Oblinger, Barone, and Hawkins, 2001). Scalable distance-education models may provide a solution to capacity

constraints growing enrollments place on the current higher education infrastructure.

More and more learners are requiring flexibility in programme structure to accommodate their other responsibilities, such as full-time jobs or family needs (Carnevale, 2000). With these constraints, students shop for courses that best accommodate their schedules and learning styles, and then transfer the credit to the university where they would earn their degrees (Carnevale, *ibid*). Carnevale (2000) refers to this notion of acquiring and exchanging credit at different institutions than the one they receive their degree from as “academic currency” and as of 1999, 77% of all students graduating with a baccalaureate degree had attended two or more institutions.

Students’ demand is being supported and answered. In 1998, 83% of governors identified “allowing students to obtain education anytime and anyplace via technology” as a critical characteristic of universities in the twenty-first century. Given the demand and response, education is becoming a commodity, making student consumers and putting them in a position to shop for the best deal (Pond, 2003; West, 1999).

One result of the highly competitive e-learning market would be institutions that specialize in meeting particular niches in the market (Gallagher, 2003). Barone (2003) observed, “We can see the beginnings of the trend toward the unbundling

of courses, credits, services, and fee structures.” Dunn foresaw a similar trend, predicting that “courseware producers would sell courses and award credits directly to the end user and thus, through intermediation, bypass the institutional middleman” (Dunn, 2000). The transition would also blur the distinction between two- and four-year colleges and universities (Carr, 1999). In that context of greater portability, more educational brokers e.g., Western Governor’s University, Excelsior College, Charter Oak State College, etc. would exist. Further, Pond (2003), asserted that institutional success for any higher education enterprise would depend more on successful marketing, solid quality-assurance and control systems, and effective use of the new media than on production and communication of knowledge.

Online students are becoming an entirely new sub-population of higher-education learners. They are generally older, have completed more college credit hours and more degree programs, and have a higher all-college GPA than their traditional counterparts (Diaz, 2002). For example, Diaz has noted that online students received twice as many A’s as traditional students and half as many D’s and F’s.

The modern, traditional-age college students are unlike past generations. They are interested in qualifications from small modules and short programmes and in learning that can be done at home and fitted around work, family, and social obligations (Bates, 2000). Information-age learners prefer doing to knowing, trial-and-error to logic, and typing to handwriting. Multitasking is a way of life for

them, staying connected is essential, and there is zero tolerance for delays. Further, modern literacy includes not only text but also image and screen literacy. It involves navigating information and assembling knowledge from fragments (Oblinger et al., 2001; Jones & Pritchard, 2000).

Today's adult learners differ still from traditional college-age students. They tend to be practical problem solvers. Their life experiences make them autonomous, self-directed, and goal- and relevancy-oriented. They need to know the rationale for what they are learning. They are motivated by professional advancement, external expectations, the need to better serve others, social relationships, escape or stimulation, and pure interest in the subject. Their demands include time and scheduling, money, and long-term commitment constraints. They also tend to feel insecure about their ability to succeed in distance learning, find instruction that matches their learning style, and have sufficient instructor contact, support services, and technology training (Dortch, 2003; Diaz, 2002).

Approximately 42 per cent of all students at both private and public institutions are age 25 or older (Aslanian, 2001). Not only are they numerous, adult learners are the fastest-growing population in higher education. While the number of 18-24-year-old students increased only by 41% between 1970 and 2000, the number of adult students increased by 170% (Aslanian, Ibid). Some factors that might influence this phenomenon include the growth of continuing education

programmes, economic necessity, the rapidly changing job market, changes in the economy, and the simple aging of student populations (Bishop & Spake, 2003).

For instance, few higher education institutions around the world appear to have escaped the collapse of financial markets. In Asia, Africa, North America, Europe, and Britain and down under in Australia and New Zealand, universities have been hit hard as the value of their investments in property and shares and, in many cases, their income from diverse sources crumples (Pityana, 2008). Adults who may have lost their jobs are coming back into higher education in order to equip themselves with the skills that they need in order to compete for ever-scarcer vacancies. As this happens, higher education institutions, already battered by their losses and constraints, have to balance the demand for access from mature and new learners, for a limited number of places

Like growth in adult learners, the percentage of women and minority learners is increasing. More women than men now enrol in college (57% of students are women), a trend supported by the fact that more women are entering the workforce (Lifelong, 2002). Among minorities, the proportion of women is even higher: 60% of Hispanic and two-thirds of African-American college students are women (Cetron & Daview, 2003). If enrolment follows population projections, higher education can expect this trend to continue for example the Hispanic population in the U.S. is expected to increase by 63% by 2020, reaching 55 million people (Lifelong, 2002).

Studies comparing online course retention rates with traditional courses are inconclusive. This may be due to the newness of online education, but individual schools and organizations are reporting that their online programmes have as high or higher rates of retention as their traditional classroom offerings (Roach, 2002). Some claim that distance education attrition is high. A Chronicle of Higher Education article in 2000 reported that no national statistics exist yet about how many students complete distance programmes or courses, but studies by individual institutions suggest that course-completion and programme-retention rates are generally lower in distance-education courses than in their face-to-face counterparts (Brady, 2001).

Brigham (2003), in a benchmark survey of four-year institutions' distance education programmes, found that 66% of the distance-learning institutions have an 80% or better completion rate for their distance education courses; 87% have 70% or better completion. Diaz (2002) asserted, and others (Bolam & Dodgson, 2003; Allred, 2003) concur, that many online students who drop a class may do so because it is the right thing to do. In other words, because of the requirements of school, work, and/or family life in general, students can benefit more from a class if they take it when they have enough time to apply themselves to the classwork thus they may be making a mature, well-informed decision.

## **2.6 Challenges of Implementing Distance Learning in Africa**

For the Developing World and in particular Africa ODL is a promising and practical strategy to address the challenge of widening access thus increasing participation in higher education. It is increasingly being seen as an educational delivery model which is cost-effective without sacrificing quality. On the African Continent where resources are scarce and higher education provision is poor, ODL is viewed as a viable, cost effective means of expanding provision without costly outlay in infrastructure (Pityana, 2009). Holding the promise of economies of scale and expanded geographical reach, it is not surprising that many African governments are starting to explore this potential.

While distance education holds promises, a number of obstacles would have to be addressed before it can be fully utilized in Africa. There are a number of technological constraints that hinder distance education. Telephone and other communication infrastructures outside of major cities remain inadequate. Connectivity beyond major capital cities poses a potential problem in creating a national distance education strategy. According to International Telecommunications Union (ITU) statistics, Africa has less than 2 main telephone lines per 100 inhabitants and less than 0.52 per 100 inhabitants in sub-Saharan Africa as compared to 50 main telephone lines per 100 inhabitants in Western Europe. (ITU, 2008). The situation is worse in rural areas with less than 0.06 main telephone line per 100 inhabitants where over 72 percent of the total population

lives. Africa has very few direct links among its countries and this has led to a lot of transit costs being paid to foreign operators outside the continent in hundreds of millions of US dollars.

Another challenge is the lack of a trained cadre of professionals to support the implementation of distance education. The effective use of distance learning technologies demands that teaching staff be properly trained in using distance education as a delivery mode. To date, few African scholars are familiar with teaching in an online environment. This situation poses a major challenge in introducing distance education on the continent.

The absence of clearly defined national distance education policies in most African countries poses another challenge. Policies are needed to provide a framework for the development of distance education. With the exception of South Africa, few African countries have a clearly defined national information or communication policy to guide the development of distance education in their respective countries. The absence of such a policy is a clear obstacle to the development of distance education.

Access to connectivity remains one of the major challenges in Africa. Students would need access to computers that can send and receive messages using web browsers such as Explorer or Netscape. In addition, they would have to find on their computers word processors and other applications to complete basic

assignments. Easy and inexpensive connections to Internet service provider would be required. In addition, depending on the nature of a given course, students might be required to use a VCR to play videotaped instruction and perhaps tape recorded lectures. Textbooks and other printed materials certainly would still be part of the curriculum. All of these basics require funds which many individuals and institutions simply do not have.

Closely related to these connectivity issues are financial matters. ISP services are expensive in Africa. The connecting colleges charge tuition, in some cases by law, very high tuition to students taking courses. A source of financial support would be needed. Multilateral agencies such as the World Bank, the U.S. Agency for International Development (USAID), and institutional donors such as religious organizations and employers have a role to play in exploring funding options.

Another challenge to overcome is cultural bias. Current research into distance education has focused on the process as a Western social/cultural/educational construct, and is being viewed by some as a way to export this world view to other nations more efficiently and quickly than by other media currently available (Barker and Dickson, 1996). Distance learning, by its very nature, involves more than just the transmission of information, but also the transmission of cultural/social paradigms between and among the participants. Any design of a distance learning curriculum needs to be sensitive to cross-national cultural experiences (Cummings and Sayers, 1996). To date, most of the distance learning

models have been developed and tested outside Africa, in American, Canadian, or European educational environments without diligent research focusing on localizing content (Cummings and Sayers, 1990).

## **2.7 Staff Trends**

Rather than incorporate the responsibility for all technology and competency-based functions into a single concept of teaching staff member, universities are disaggregating teaching staff instructional activities and assigning them to distinct professionals (Paulson, 2002). Doing this involves a deliberate division of labour among the teaching staff, creating new kinds of instructional staff, or deploying non-tenure-track instructional staff (such as adjunct staff, graduate teaching assistants, or undergraduate assistants) in new ways (Paulson, *ibid*). Distance education teams include administrators, instructional designers, technologists, and instructors/facilitators (Miller, 2001; Williams, 2003). The role of staff members in distance education requires some specialized skills and strategies. Distance education instructors must plan ahead, be highly organized, and communicate with learners in new ways. They need to be accessible to students and work in teams when appropriate. Distance teaching staff members must be experts in maintaining communication, because there is increased demand for student interaction in distance learning (NEA, 2000). They may also have to assume more administrative responsibilities than is true in a residential model.

Staff members tend initially to try to use their residential classroom methods to teach at a distance and then become frustrated when attempts are unsuccessful. In Green's (2002) survey of the role of computing and information technology in U.S. higher education, chief academic and information technology officials rated "helping teaching staff integrate technology into their instruction" the single most important IT issue confronting their campuses over the next two or three years. An EDUCAUSE survey supported the issue's importance: "teaching staff development, support, and training" were rated the fifth overall strategic concern, as well as the fifth IT issue most likely to become even more significant in the next year. However, despite IT leaders' rising concern over the issue, it is not yet among their top ten uses of time or resources (Crawford & Rudy, 2003).

Teaching staff tenure status is coming under more fire as new state, private, and for-profit distance-learning universities are created. For example, Florida Gulf Coast University, a new distance-learning state university, and BYU-Idaho, a private four-year university, would not have tenured teaching staff members. The results of Green's 2000 survey support this trend: governors rated maintaining traditional teaching staff roles and tenure as the least desirable characteristic of a twenty-first century university. Since distance educators and administrators must secure instructors and course content experts, access to on-campus professors and their arrangements with the university become significant factors affecting distance education. Contributions to distance education rarely move staff members

toward tenure; therefore, dissolving tenure might make them more likely to participate in distance education efforts.

As long as distance education contributions are not considered in tenure and promotion decisions, and as long as professors have their own, traditional ways of delivering their courses, many teaching staff members would be reluctant to participate in online courses (Oravec, 2003). Concerning this reluctance, Dunn has predicted that many teaching staff members would revolt against technological course delivery and the emerging expectations their institutions would have of teaching staff members. Dunn forecast that some of the resistance would even be manifest through unionization and strikes (Dunn, 2000). Some have suggested the labour-intensive and time-consuming demands required to develop online modules as reasons for teaching staff resistance (Brogden & Couros, 2002).

Despite some resistance, the results of the study by Brogden showed a strong increase in overall teaching staff support for technology in education, with only 22% viewing it as important in 1999 and 57% in 2002. Instructors feel that web-based technology is helping them achieve their teaching objectives (Brogden, Ibid).

A 2002 study similarly showed that most teachers (85%) were not philosophically opposed to distance education (Lindner, Murphy, Dooley, and Jones, 2002). Further, teaching at a distance improves perceptions of distance education factors:

teaching staff members who had not taught distance education courses perceived the level of support as lower than those who had (Lindner *et al.*, *ibid*). Carr (2000) found similar results: 72% of those who had taught distance-learning courses were favourable compared with 51% who had not taught at a distance.

Despite growing support among teaching staff members for distance learning, there are acknowledged drawbacks. “Design teams and instructors must anticipate isolation that can be felt by instructors who are separated from their students. This isolation may affect instructor satisfaction, motivation, and potential long-term involvement in distance learning” (Carr, 2000). They anticipated the potential for feeling isolated and suggested that “feelings of isolation may be offset by the instructor’s ability to work with peers in other institutions or with students across the globe.

An NEA survey reported that teaching staff members’ top concern about distance education was that they would do more work for the same amount of pay, apparently a merited concern. The NEA (2000) found that most teaching staff members do spend more time on their distance courses than they do on traditional courses, and 84% of them do not get a reduced workload. Similarly, 63% of distance teaching staff members receive no extra compensation for their distance courses.

A UCEA survey of four-year institutions found that 64% of teaching staff members were compensated for distance courses with normal, on-campus salary; 74% were additionally given development stipends. However, 82% of respondents added a qualifier about how compensation for distance learning depended on the type of course, the rank of the teaching staff member, and other factors (Hickman, 2003).

## **2.8 Academic Trends**

One cannot dispute that there is proliferation of new information. In the past, information doubled every 10 years; now it doubles every four years (Aslanian, 2001). This growth in information would certainly continue to dramatically impact higher education and learning in general. Knowledge proliferation may increase content-breadth demands on higher education, spreading distance education resources ever thinner and complicating development decisions.

Changes in the institutional landscape may magnify competition among educational providers and allow new models and leaders to emerge. For-profit institutions are the fastest-growing sector in education (Gallagher, 2003; Pond, 2003). Currently, only 4 to 5% of all higher-education students are enrolled with for-profit providers, but 33% of all online students are enrolled with these same providers (Gallagher, 2003). As Bates (2000) observed, this phenomenon could have a dramatic impact on higher education.

The private sector concentrates on those areas where profits are most easily made, such as business programmes and information technology courses. However, this leaves those areas that cannot pay their way, such as many arts and social science programmes, and possibly health science because of the high cost, to the public sector. With the loss of cross-subsidy, the higher education sector would be in even more financial trouble (Anderson, 2001).

Dunn (2000) projected changes in higher education's landscape over the next 20 years. The number of degree-granting institutions would continue to grow, while the number of traditional campuses would decline. By 2025, half of today's existing independent colleges would be closed, merged, or significantly altered in mission. Another aspect changing in higher education is the blurring line between public and private universities, especially in the financial arena. Dunn also predicted that the distinctions between and among public and private, for-profit and non-profit institutions of higher education would largely disappear. White (2003) observes this blurring as already taking place.

Much of distance education programmes' success or failure can be attributed to how it is organized. Hickman (2003) observed a movement from a highly centralized core of administrators, coordinators, and marketing and support staff to a more 'institutionalized' approach in which continuing education personnel were assigned to academic units within a university. He noted that others with a semi-decentralized model in which continuing education personnel were assigned to

academic units (decentralized), while the support and marketing infrastructure remained centralized to coordinate interdisciplinary work. Pointing to a series of UCEA managerial surveys, Donaldson (2003) affirms, that the organization of continuing education is tended to be related to issues of centralization/decentralization of both its administrative and academic functions. In the 2002 managerial survey, UCEA found an increase in the academically/administratively centralized model (28% for public and 44% for private institutions) and the academically decentralized/administratively centralized model (58% for public and 32% for private institutions). But as Donaldson reminds, “There are strengths and weaknesses in all these models.

Instructional approaches are becoming more learner-centered: “recursive and non-linear, engaging, self-directed, and meaningful from the learner’s perspective” (McCombs, 2000). Whereas in the past, most instructors followed a transmission or lecture-style approach to teaching, more instructional diversity is occurring among teachers who are trying a larger variety of approaches (Eckert, 2003). A pedagogical shift is likewise occurring within distance education, moving from a transmission model to constructivist, socio-cultural and metacognitive models. These models use computer-mediated communication and emphasize students’ responsibility for their own learning (Rumble, 2001; Miller, 2001).

Distance education can be seen to be evolving from an essentially modernist (bureaucratic or Fordist) form of education into a post-modernist phenomenon

with a focus on the student as consumer, on flexibility and global reach (Rumble, 2001). With this transition, there is also a shift towards increased accessibility for those who are disabled. Many feel that e learning holds great promise for learners with physical and mental challenges (Frydenberg, 2002).

In a recent poll by the North Central Association of Colleges and Schools, university presidents, administrators, and teaching staff members rated increasing demands for accountability (80%) and expanding use of distance education (78%) as the highest impact trends on future NCA activities. Programmes such as the “State-by-State Report Card for Higher Education” manifest this growing emphasis on academic accountability. Noting this trend, Dunn (2000) forecast the following:

Accreditation and programme approval would be based more on educational outcomes. Testing programmes would be put in place by discipline organizations, federal and state governments, corporations, and testing companies. Large corporations would develop their own approval systems. By 2025, there would not be one national accreditation system, although the U.S. Department of Education would provide a basic safety net for quality (Pond, 2003). Distance educators must plan to accommodate this emphasis on accountability if they are to maintain accreditation and meet consumer demands.

Related to the shift toward accountability, there is a slight shift from “theoretical” and “seat-based time” to “outcomes-based” or “employer-based” competency. In many cases, certification is becoming more preferable than a degree (Gallagher, 2003). Diplomas are less meaningful to employers; knowledge, performance, and skills are what count to them. Callahan, 2003 also found this trend; 66% of governors identified integrating applied or on-the-job experience into academic programmes as a critical characteristic of universities in the 21st century. With an emphasis on competency, course content would be dictated more by what learners need, than by what has been traditionally done.

As universities shift toward competency and institutions cater more closely to learners’ specific needs, the distinctions between high school, undergraduate college, and graduate programmes would dissolve. Incentives would be given to students and institutions to move students through at a faster rate and the home school movement would lead to a home-college movement (Dunn, 2000). Student support is critical element in an effort to cater for the learners’ needs in distance education programmes. With a system of support available to a student, the sense of isolation can be minimized. Support takes the form of counseling and advice about study methods, essay writing, research and use of the computer and library, communication with the tutor or lecturer, assessing the problem in order to benefit from an enquiry from the facilitator and, of course, programmed tutorial and study groups either with the facilitator or with a peer group. Another necessary instance is that the student must have confidence in the effective management of the system

(Barney, 2008). This requires that enquiries are responded to in reasonable time, scripts are marked and comments detailed and helpful, and that examinations are well organized and results communicated in a timely manner.

Universities are traditionally independent, free-standing, and competitive (Hawkins, 2003). On the other hand, distance learning institutions have been more cooperative and accommodating with partner institutions. Interestingly, Rubin (2003) has noted that traditional universities are becoming more like distance learning universities and not the opposite. With this shift, more institutions are creating partnerships with other colleges, universities, companies, and other kinds of institutions to share technology and to produce and deliver courses (Carnevale, 2000; Dunn, 2000; Cheney, 2002). It is predicted that higher education teaming would be successful: by 2005, partnerships and outsourcing would produce courseware applications covering the 25 college courses that enrol 50% of all credits (Dunn, 2000; McIsaac, 1998; Paulson, 2002). Partnerships present benefits as well as obstacles. Winning accreditation, providing student services, setting tuition, figuring out finances, and transferring course credits are among the thorny issues that administrators find themselves struggling to face collectively (Carnevale, 2000).

The central issue in courseware development at the moment is the potential for developing reusable learning objects, tagging them in a systemic way, storing them in well-designed databases, and retrieving and recombining them with other

objects to create customized learning experiences for specific needs (Frydenberg, 2002). Farhad Saba referred to this as part of the post-industrial culture, pointing out that traditional academe is still in the industrial or mass-production and standardized testing culture. According to Saba, true individualized learning is the future and strength in educational technology (Saba, 2003; Bates, 2003). Others have likewise noted the increasingly widespread standardization and reuse of content (Anderson, 2002; Gallagher, 2003).

## **2.9 Technology Trends**

One of the most apparent trends affecting distance education is the advancement of technology. Infrastructures are growing stronger as computers double in speed while decreasing in cost, and high-speed network connections continue to expand. Computer, fax, picture phone, duplication, and other modalities are merging and becoming available at cheaper prices (Cetron & Daview, 2003). Further, IT functionalities not imagined ten years ago are being realized. By 2018, computers would be able to routinely translate languages in real-time with the accuracy and speed necessary for effective communications (Cetron & Daview, *Ibid*). New technology would transform higher education as we know it today (Oblinger et al., 2001), one example being the changes caused by broader use of e-texts and PDAs (Chick *et al.*, 2002). By the year 2012, schools and colleges would routinely use computerized teaching programmes and interactive television lectures and seminars, as well as traditional methods. Videoconferencing and other

technologies would also help enrich distance media and provide many benefits of face-to-face instruction.

Not only is technology becoming more ubiquitous, it is being used more competently by more people from all nationalities, age groups, and socio-economic levels (Murray, 2003). There has been a 59% increase in the number of children accessing the Internet since 2000 (Murray, 2003). As Cetron and Daview (2003) report, the number of current Internet users is approximately 500 million worldwide and would almost double by 2005. One reason for the growth is a growing percentage of users outside the US; Americans have dropped from 42% to 37% of the total net-using population within the last three years. However, this decrease does not reflect a decline in American users. By 2002, 83 per-cent of all American family households reportedly owned computers, and 78 per-cent of children live in a home where they or their parents have access to the Internet. That represents a 70-percent growth rate from 2000 (Murray, 2003).

With advances in technology, much of open distance education is driven by technology. Courses are designed with technology in mind and ICT is increasingly being used to assist in learning (Barney, 2008). This technology enables the student to have direct and immediate access to the lecturer, may participate in chat rooms with other learners and the lecturer, to transmit materials by electronic mail, may access the digital library and browse the internet doing their own research or may have lectures posted on the web. There is also a growing trend whereby some

courses are available only via electronic means. Telematic centres and multi-medium learning models established in many institutions offering distance education either in dedicated distance education institutions or in dual mode institutions which are principally contact learning institutions but operate limited distance education programmes

Technology may continue to increase the options available for distributing distance education to more people in a scalable fashion, especially if it is accompanied by technological fluency. The increase in Internet usage includes competence as well as sheer numbers: by 2005, computer competence would approach 100% in U.S. urban areas (Cetron & Daview, 2003). The networked world is dominating the economy, increasing the power of the individual, and changing business models that no one can afford to be without computer competence. Accordingly, universities are beginning to list the fluent use of technology as an outcome skill, encourage students to take online courses, and even requiring students to take at least one online course before they graduate (Young, 2003).

## **2.10 Economic Trends**

The Washington-based Center on Budget and Policy Priorities recently calculated the combined deficits of the nation's 50 state governments to total \$85 billion within the next year, the highest number since the Great Depression (White, 2003). This recession would prompt all universities to seek additional external sources of

funding. To worsen the problem, university costs and enrolments are growing (UCEA, 2001). Some institutions are beginning to consider distance learning as a possible solution to the dilemma (Jones, 2003), but start-up expenses for distance education programs are typically high.

While distance learning is a potential solution to decreasing resources and rising demand, the issue is far from being resolved. A study from the Colorado Department of Education reported that the cost per student of a high-quality online learning programme is the same as or greater than the per-student cost of physical school i.e., traditional education (Branigan, 2003). The study also explained that most costs in education are for staffing. EDUCAUSE reported similar results that Information Technology Funding Challenges has become the number-one Information Technology-related issue in terms of its strategic importance to the institution, its potential to become even more significant, and its capture of Information Technology leaders' time (Crawford & Rudy, 2003).

Some have estimated that people change careers, on average, every 10 years (Cetron & Daview, 2003). Labor Department officials estimate that approximately 40% of the workforce change jobs every year. Undoubtedly, the changing nature of the workforce in the Information Age would require a continuous cycle of retraining and retooling (Dasher-Alston & Patton, 1998; Dunn, 2000; McIsaac, 1998). To add to the demands for a dynamic workforce, retirement would be delayed until late in life (Cetron & Daview, *Ibid*). In such circumstances, the

opportunity for training is becoming one of the most desirable benefits any job can offer, and employers are coming to view employee training as a good investment (Cetron & Daview, Ibid). Accordingly, an increasing number of employers (85% of Fortune 500 companies) are paying for their employees to go back to school to stay current with changes (Markel, 1999).

Alvin Toffler wrote that the illiterate of the 21st century would not be those who can't read and write. They would be those who can't learn, unlearn, and relearn (Pond, 2003). Considering these factors, some are concerned about how well higher education would be able to respond (Dasher-Alston & Patton, 1998). Some of the changes accompanying the growing demand for lifelong learning, would demand short accelerated programmes, well-suited for online delivery, and portfolio credentials (Gallagher, 2003).

### **2.11 Distance Learning Trends**

The literature is replete with evidence of the growing demand for distance education. The annual market for distance learning is currently \$4.5 billion, and it is expected to grow to \$11 billion by 2005 (Kariya, 2003; Pond, 2003). As Oblinger and Kidwell (2000) have noted, the International Data Corporation (IDC) expects a 33% growth rate in distance education over the next several years. Some analysts predict that demand for distributed education would grow from five percent of all higher education institutions in 1998 to 15 percent by 2002 (West,

1999). Others have asserted that up one-half of traditional campus programmes would soon be available (alternatively or exclusively) online (Finkelstein, Frances, Jewett and Scholz, 2000; Bishop, 2003; Dunn 2000; Winsboro, 2002).

Organizations from within and outside higher education are adapting to accommodate the growth in distance learning. For example, human resource professionals and hiring managers are becoming more accepting of online degree credentials (Lifelong, 2002). Further, more and more university systems are spinning off new virtual or online universities—for example, Penn State's World Campus, Arizona Regents University, California Virtual Campus, and many others.

Some reasons for this remarkable growth include efforts to expand access to more students, alleviate capacity constraints, capitalize on emerging market opportunities, and serve as a catalyst for institutional transformation (Oblinger & Kidwell, 2000). Another factor influencing growth may be competition with other institutions. Universities offering distance education are often perceived as modern and technologically competent, thus creating a competitive advantage (Bishop, 2003).

Distance students include both the traditional continuing-education students (i.e., adult learners) and growing numbers of younger, on-campus students (Anderson, 2001). One estimate is that as many as half the students in online courses are from

the traditional 18- to 25-year-old student cohort who normally take campus-based courses (Roach, 2002).

Distance education has existed in some form or another since the 1800s. However, accompanying the growth in Internet usage, today's distance education focus has dramatically shifted toward network-based technologies in general and Internet-based delivery more specifically (Kinley, 2001). Today, the Internet is being used more than other continuing education delivery strategies, such as Interactive Television (ITV), correspondence, and live-remote location combinations (Hickman, 2003). Not only is online learning more common now, but it increases 40% annually (Gallagher, 2002). One reason for the growth is the fact that digital media are transferable, storable, and widely accessible (Pond, 2003).

The UCEA Distance Learning Community of Practice (2002) collected a baseline survey of distance enrolments by medium. The average enrollment in university-level independent study courses was 4,725, with 56% of course credits delivered in print, 25% online, and 19% granted by passing waiver examinations. In 2002, Brigham Young University Independent Study had 24,351 university-level enrolments. Of those, 32% were delivered online and 68% on paper—an increase in web-delivered courses since 1998, when only 15% were online (BYUIS, 2003).

As universities digitally enhance more courses, the distinction between distance and local education is becoming blurred (Dunn, 2000). Digitally enhanced courses

provide students in traditional classrooms with more opportunities for independent study: Even in a residential ‘face-to-face’ system, students spend much of their time working on their own. It may always have been so, but the increase in resources for individual learning and especially those through the new technologies has provided students with far more powerful tools for independent learning (Rumble, 2001). Clearly, distance students are not the only ones who benefit from distance courses. In fact, most online students live in the local vicinity of the institution offering their course (Carr, 2000). As a result of online courses, many institutions struggle to define Internet students (Hickman, 2003). Traditional in-state, out-of-state, and international student distinctions are being eliminated, and the corresponding fee structures for the respective groups are breaking down (Carnevale, 2000). Currently, 74% of distance learning institutions do not charge out-of-state distance students out-of-state tuition, 91% do not charge international students more, and 71% do not charge more for distance courses than they do for on-campus courses (Brigham, 2003).

With all the growth in online education, student- and course-managing systems are becoming ever more crucial. Web services is a relatively new term used to describe new software standards that allow for integration of different applications as well as the secure exchange of data over the Internet (Crawford & Rudy, 2003). Web services ranked number seven on the EDUCAUSE strategic Information Technology concerns list, number six on the list of issues becoming more

significant, and number three on list of highest resource expenditures. EDUCAUSE predicted that at some point, vendors would offer a standard approach to data integration, interchange and interface (Crawford & Rudy, Ibid). Instructional/course management systems were similarly ranked number nine on the IT issues most likely to become more significant in 2003-2004 (Crawford & Rudy, 2003).

Technological advancements have naturally caused distance educators to ask how new technologies such as wireless, mobile laptop computing, personal digital assistants (PDAs), videoconferencing, videostreaming, virtual reality, and gaming environments enhance distributed learning (Crawford & Rudy, 2003). While many studies have shown no significant difference when comparing online with traditional courses, applying traditional teaching strategies at a distance often causes frustration (Dasher-Alston & Patton, 1998). Appropriately, then, developing distributed learning and teaching strategies for online education was ranked number eight on the EDUCAUSE list of Information Technology strategic concerns (Crawford & Rudy, Ibid). Distance learning research should focus on delivery strategies that help solve the capacity constraints, economic concerns, and higher-education consumer needs.

## **2.12 Summary**

In summary, many trends in higher education would influence the future of distance learning. Student enrolments are growing to surpass the capacity of

traditional infrastructures, learner profiles are changing, and students are shopping for education that meets their needs. Traditional teaching staff roles, motivation, and training needs are shifting while workload, compensation, and instructional issues continue to deter them from distance learning participation. The institutional and organizational structure of higher education is changing to emphasize academic accountability, competency outcomes, outsourcing, content standardization, and adaptation to learner-consumer demands. The Internet and other information technology devices are becoming more ubiquitous while technological fluency is becoming a common expectation. Funding challenges are increasing with fewer resources to meet expanding, lifelong-learning demands. Distance education is becoming more abundant, especially online, and location independent, increasing the need for effective course-management systems and teaching strategies that utilize technology.

In response to these trends, distance learning may rise to meet student needs and overcome funding challenges that traditional institutions cannot. Open and distance education administrators must resolve concerns with teaching staff and university administrators to ensure adequate support, as well as to develop the needed course management systems and teaching strategies. Technological advances and increased fluency would continue to open opportunities for open and distance education. Although higher education institutions are changing to favour open and distance education, the complexities of major transformations would require patience. As Bates (2000) suggests, perhaps the biggest challenge in

distance education is the lack of vision and the failure to use technology strategically. The challenge is understandable, given the complexity of the issues involved. Clearly, each institution needs to understand where on-line open and distance education fits in its vision of the institution's future and in its mission. Further, institutions would strengthen their open and distance learning strategic plans by identifying and understanding open and distance education trends for student enrolments, teaching staff support, and larger academic, technological and economic issues.

Literature reviewed indicates that there is increased demand for higher education in Africa and Kenya in particular that is beyond the governments' ability to shoulder. The various commissions set up by the government to look into the issues concerning education in Kenya have recommended the use of open and distance education as a means of providing education to the masses at reduced costs. However, despite these recommendations open and distance education still remains a tiny component of the country's higher education. Literature also indicates that there is no policy in the country governing these programmes of education. Lack of funding and technology constraints have been cited as some of the barriers to proper implementation of the open and distance education programmes.

The literature also reveals that like other regions in the world, higher education in Africa and Kenya in particular is necessary for the country's development, and yet

this has not been achieved as there is inadequate access to this level of education. However, due to the advent of distance education, the problem of access would be addressed. Institutions of higher learning in Africa need to realize that open and distance education is a necessary component that makes access to higher education for the majority of Africans and Kenyans in particular a reality and work towards implementing the open and distance education programmes.

Not enough research has been done on specific challenges of open and distance education in universities in Kenya as revealed by the literature reviewed. This therefore is the gap that this study aimed to fill.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

In this chapter, the research design for this study is described. The population and instruments used for data collection are outlined too as well as the administration of the research instruments and methods of data analysis.

#### **3.2 Study Design**

This study sought to describe the status and analyze the challenges of open and distance learning in Kenya's public universities. Descriptive survey design was adopted in conducting this study because it is concerned with describing, recording, analyzing and reporting conditions that exist or existed (Kothari, 1985). The survey would describe the status of open and distance learning and analyze the challenges of this type of education. Engelhart (1972) further asserts that survey methods are widely used to obtain data useful in evaluating present practices and in providing the basis for decisions. Descriptive study design helps to secure evidence on existing situations and conditions and to identify standards with which to compare the present hence plan for the way forward.

Data were gathered from sources through administration of various instruments to a section of respondents drawn from the public universities. The necessary documents on open and distance learning were also analyzed. The research sites

were Nairobi, Nyanza and North Eastern provinces. The information collected was subjected to both qualitative and quantitative analysis. Using the tools of descriptive statistics, a mass of numbers can be presented in an organized and meaningful fashion, and data can be simplified so that the general trend can be seen (Orodho, 2005). Descriptive statistics may be applied on both qualitative and quantitative data. Qualitatively, the study used document and content analysis.

### **3.3 Target Population**

The study targeted the seven public Universities in Kenya, University of Nairobi, Kenyatta University, Moi University, Egerton University, Jomo Kenyatta University of Agriculture and Technology, Maseno University and Masinde Muliro University with a total student population of 19,337, and teaching staff population of 4,210. At the time of the study, the total population of students registered in ODL programmes were 8215 while the staff facilitating ODL were 446. According to Luck and Rubin (1993), two categories of respondents are necessary in research, and these are the informed specialists and the consumers or users. The specialists tend to have the most ideas and usually have considerable experience to draw upon (Otieno, 2005). Consumers on the other hand are in a position to express their needs and dissatisfaction that point to the difficulties or opportunities in using a good, service or facility.

Williams (1992) identifies four groups of people with a right to be heard in education in any country. These are the academics who are experts in education, institutional managers, who have a broader, trans-disciplinary academic viewpoint, the government, representing the interests of society as a whole, and students as consumers of the academic services. The students who participated in the study were those enrolled in the open and distance learning programmes in Kenya's public universities as opposed to those registered in the residential programmes. In Kenya, the public universities offering open and distance learning are University of Nairobi, and Kenyatta University. University of Nairobi offers open and Distance learning under the Center for Open and Distance Learning with a total enrolment of five thousand four hundred (5,400), Kenyatta University offers the programme under the Institute of Open Learning with an enrolment of two thousand eight hundred and fifteen (2,815) students. The two universities have got centres in all the eight provinces - Nairobi, Riftvally, Nyanza, Western, Central, Eastern, North Eastern and Coast, where students meet occasionally for various support programmes. The University of Nairobi has got a total of ten (10) centres located in the towns of Nairobi, Nakuru, Mombasa, Kisumu, Kakamega, Kisii, Nyeri, Meru, Kapenguria and Garissa. Kenyatta University on the other hand has got nine (9) centres located in the towns of Nairobi, Nakuru, Mombasa, Kisumu, Kakamega, Nyeri, Embu, and Garissa. The centres also act as points of collection of study materials, libraries and counseling centers.

The informed specialists in the study included the lecturers in the open and distance learning and the managers of the programmes. The arm of government which played a role in the study was the Ministry of Education. Its involvement was crucial in providing the necessary documents analyzed in the study together with those obtained from the universities that participated in the study.

### **3.4 Sample and Sampling Procedures**

The study used a combination of both probability and non-probability sampling. The probability design employed was random sampling while the non-probability method used was purposive sampling. Purposive sampling was used to select two public universities with major components of open and distance learning, namely University of Nairobi and Kenyatta University. This method was also used to select the study centres used in the study. A total of six (6), three from each of the two universities were selected for the study. The centres included: Nairobi, Kisumu and Garissa for both the University of Nairobi and Kenyatta University. Nairobi was selected to represent the urban setup, Kisumu to represent the rural setup while Garissa was selected to represent the hardship areas setup. Purposive sampling was also used to select two senior university administrators in open and distance learning programmes. These are the managers who are directly involved in the provision of open and distance learning in the two universities. These administrators, the directors of open and distance learning one from each of the universities are more versed with the challenges they face in the delivery of open

and distance learning and are therefore in a position to suggest areas that need improvement.

Random sampling method was however adopted in the study to select the teaching staff and students who participated in the study. The study sample was arrived at using tables instituted by Krejcie and Morgan (1990). These are tables which help the researcher determine, with 95% certainty, what the results would have been had the entire population been surveyed. According to the tables, for a population of between 2,800 and 3,000, a corresponding sample size should be at least three hundred and forty one (341), three hundred and sixty one (361) for a population of between 4,500 and 5,500. For a population of between 280 and 290, the corresponding sample size should be at least one hundred and sixty five (165), while for a population of between 150 and 160, the corresponding sample size is at least one hundred and thirteen (113). Table 3.1 below illustrates the breakdown of the sample size for all the respondents who participated in the study:

**Table 3.1: Study Population**

<b>Students</b>			
University/programme	Study Population	Sample Size	Percentage (%)
<b>University of Nairobi ODL</b>	<b>5,400</b>	<b>361</b>	<b>7</b>
Nairobi	765	162	
Kisumu	578	123	
Garissa	357	76	
<b>Kenyatta University Open Learning</b>	<b>2,815</b>	<b>341</b>	<b>12</b>
Nairobi	422	153	
Kisumu	319	116	
Garissa	197	72	
<b>Teaching Staff</b>			
University of Nairobi ODL	160	113	71
Kenyatta University Open Learning	286	165	58
<b>Programme Administrators</b>			
Programme Administrators (UoN/KU)	2	2	100
<b>Total</b>	<b>8,663</b>	<b>982</b>	

### **3.5 Research Instruments**

Since the study was a survey, research instruments were those that could enable the researcher to obtain as accurate information as possible. Three research instruments were therefore developed for the study, which were; questionnaires for students, questionnaires for teaching staff in open and distance learning and interview schedules for university administrators in charge of open and distance learning. Questionnaires are suitable for collecting data from a large number of students registered in open and distance learning and are capable of providing accumulation of data (Walker, 1985). Questionnaires also clarify the purpose of the study and give meaning to items that may not be clear (Best & Kahn, 1992). According to Walker (1985), interviews rely on facts that are able to offer an account of, in terms of behaviour, practices and actions to those who ask the questions. Further, interview schedules can allow the researcher to probe and follow up respondents' answers for more information and to clarify vague statements.

The students' questionnaire was structured to seek information on their reasons for enrolling in open and distance learning as opposed to the residential method of education; whether they are satisfied with the delivery of the programmes; the challenges they face in pursuing the programmes; and their suggestion on ways of improving the programmes. The other instrument employed was the questionnaire for the teaching staff. This instrument was structured to seek information on: the

training they have had on the delivery of open and distance learning, the mode of delivery they employ in open and distance learning; the type of technology they use to reach their distributed students; the challenges they face in provision of the programmes; and their suggestion on how the programmes could be improved.

The other instrument used in the study was the interview schedule for the university administrators, the directors of open and distance learning in the two universities participating in the study. This instrument was structured to capture information on: the policy guideline for open and distance learning; the facilities used in open and distance learning; adequacy of funds for open and distance learning; the challenges the institutions encounter in provision of the programmes; and what they feel should be done to address the challenges. Analysis of the relevant document was also undertaken to capture information on the status of open and distance learning and the policies guiding this type of education in Kenya.

### **3.5.1 Validity**

Validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study (Mugenda & Mugenda, 1999). Even though the most important type of validity in this study is content validity, face and construct validity was also considered. According to Huck (2000) content validity is done by expert judgment. The instruments were therefore scrutinized by

at least four university professors and lecturers in education to determine whether the items in the instruments adequately addressed the objectives of the study.

### **3.5.2 Pre-Testing of the Instruments**

Before the actual study, pre-testing of the instruments was carried out in one of the universities offering open and distance learning, Strathmore University. Even though the study is based on the public universities in Kenya, Strathmore, a private University was chosen for the purpose of testing of the instruments because apart from the two public universities participating in the study, no other public university offered open and distance learning in Kenya at the time the study was conducted. The purpose of piloting was to enhance reliability and content validity of the instruments by refining vague statements in the instruments, or removing them altogether.

Separate questionnaires used in the actual study were administered to university students and teaching staff during the piloting. The questionnaires were administered on the spot and by appointments where necessary. The respondents' reactions to the research instruments were analyzed and the necessary amendments made to the instruments before the researcher embarked on the actual study.

### **3.5.3 Reliability**

Reliability is a measure of the degree to which a research instrument yields consistent results (Mugenda & Mugenda, 1999). Reliability in research is influenced by random error, which is the deviation from a true measurement. After

the pre-test, the students questionnaire was tested for reliability using the split-half technique. Split-half is a type of reliability based on the coefficient of internal consistency of a questionnaire as a research instrument. It divides the instrument into two equal halves, in terms of even and odd numbers after it has been administered. Each half is scored independently of the other with the items of the two halves matched on content and difficulty. If the test is reliable, the scores on the two halves have a high positive association, that is, a high correlation coefficient (Orodho, 2005). This procedure was used because of its ability to measure the internal consistency of the instruments being tested. Split-half technique was preferred in this study over other methods like the test re-test method because it takes care of the changes in time and circumstances.

In this study, twenty students questionnaires and ten teaching staff questionnaires were used for pre-testing purposes. The open-ended questions were scored by giving a mark for a relevant response and a zero for irrelevant and blank responses. The questions selected were divided into two equal halves for both the students and the teaching staff taking the odd against the even numbered items. The scores of the halves were then correlated using the split half measure of reliability. Pearson Product Moment Correlation Coefficient was calculated between the scores obtained for each person on the odd items and the scores obtained on the even items. The students questionnaire yielded a half test coefficient of 0.79 while the teaching staff questionnaire yielded a half test

coefficient of 0.81. The subjects' scores were then corrected using the Spearman-Brown Prophecy formula for the full test.

$$r_f = \frac{2r}{r + 1}$$

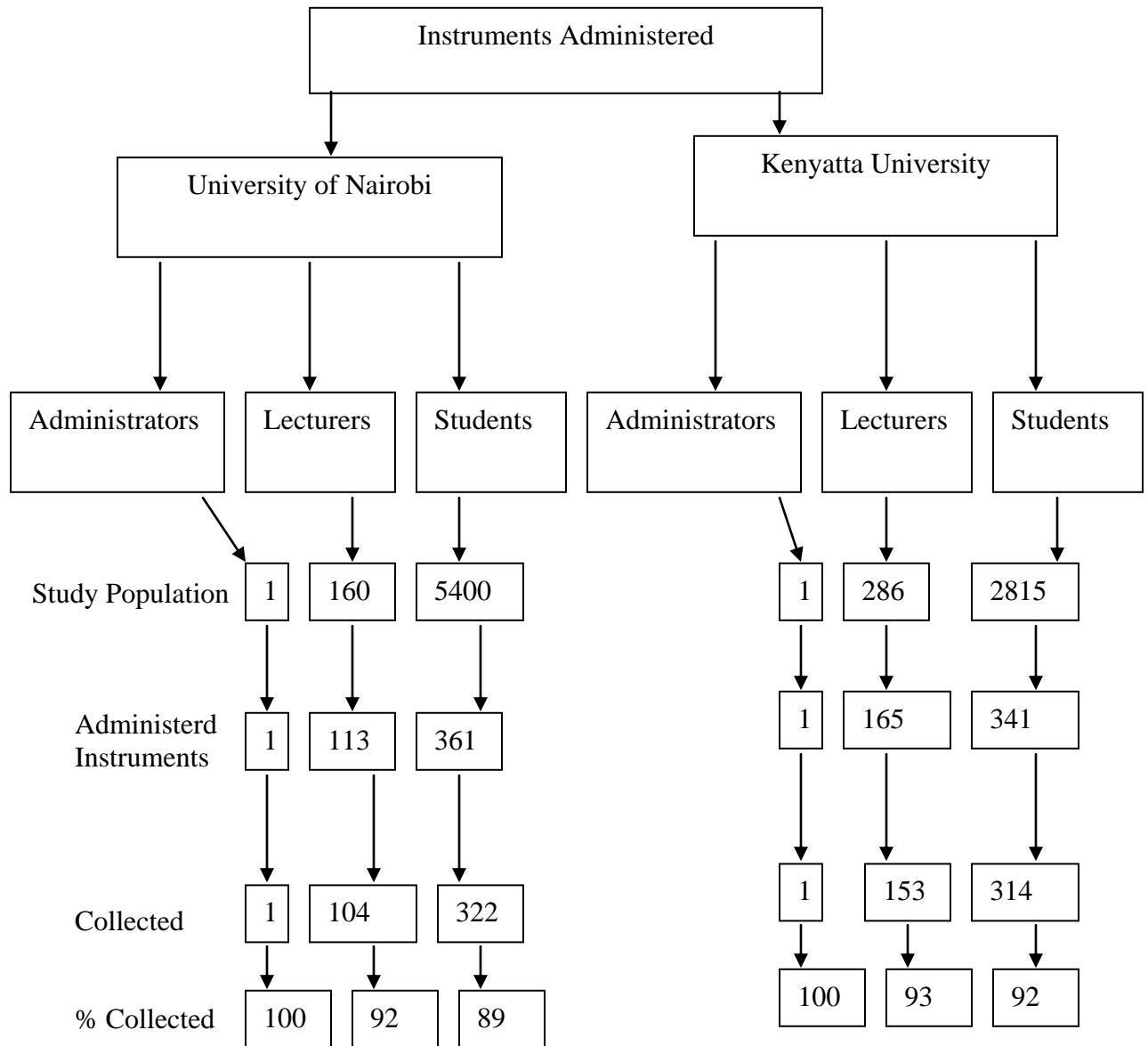
Using the formula for the full test, a total test coefficient of 0.88 and 0.89 were obtained for the students and teaching staff questionnaires respectively. The instruments were therefore considered reliable since the general rule of thumb in research, a rule that allows one to estimate quickly whenever a large calculation is required, is that reliability should be at least 0.70 (Orodho, 2005).

### **3.6 Data Collection Procedures**

Information from University administrators concerned with open and distance learning who are believed to have information on the developments, available facilities and the challenges in offering open and distance learning was obtained by directly interviewing them whereas information from lecturers and students in open and distance learning programmes was obtained by administering lecturers and student questionnaires respectively.

After getting approval from the University supervisors to proceed for fieldwork, the researcher obtained a research permit from the Ministry of Science and Technology. The researcher then went ahead to recruit a research assistant to assist her in administering questionnaires to Garissa and Kisumu centres. The research

assistant was then briefed on the research problem and research methodology on how to administer questionnaires. The appropriate number of questionnaires were produced and given to the research assistant for distribution. The researcher administered questionnaires in Nairobi centres and conducted the interviews herself after booking appointments with the respective respondents. After data collection, the research assistant surrendered the completed questionnaires from the areas covered by the assistant with the field notes. All the instruments were then pooled together for analysis. Figure 3.1 gives information on the instruments administration and collection.

**Figure 3.1: Instruments Administration and Collection**

### 3.7 Method of Data Analysis and Presentation

Data were analyzed both qualitatively and quantitatively. Quantitatively the data was analyzed using descriptive statistics. Before the analysis, data collected were edited and then coded. The questionnaires were checked to determine whether they

were complete and that the sample collected was acceptable. After going through the collected questionnaires, responses from the questionnaires and interview schedules were arranged and grouped according to individual research questions and were fed into appropriate categories in computer worksheet using the Statistical Package for Social Sciences (SPSS) version 12.0 and excel. Frequencies, percentages and cross-tabulations were then used to analyze data.

Qualitatively, data from interviews and some from the questionnaires were interpreted. The data have been presented in chapter four in form of tables and graphical presentations that are easy to understand.

## **CHAPTER FOUR**

### **DATA ANALYSIS, PRESENTATION AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the findings of the study on the status and challenges of open and distance learning in Kenya's public universities. The study sought to: find out the main models of open and distance learning in Kenya; establish access and equity in ODL delivery in Kenya; establish the adequacy and appropriateness of resources used in ODL programmes delivery; propose appropriate strategies in overcoming challenges of ODL in Kenya.

Data were collected through administration of seven hundred and two (702) questionnaires to student respondents enrolled in open and distance learning programmes and two hundred and seventy eight (278) questionnaires to lecturers in open and distance learning in two public universities, University of Nairobi and Kenyatta University. Data were also collected through interviews with two administrators in charge of open and distance learning in the two universities and analysis of relevant documents on the programmes. The data collected were fed into appropriate computer worksheets using the Statistical Package for Social Sciences (SPSS) package and Microsoft Excel. The data were then analyzed based on research objectives in chapter one.

#### **4.2 Models of Open and Distance Learning in Kenya**

There are four institutional models applied in open and distance learning delivery which include: dual-mode, single-mode, franchised international program, and direct un-franchised international provision. In dual mode, classroom and distance learning are based on common materials and in some cases students performance is evaluated using common standards. Single mode is whereby ODL is carried out by an institution that is wholly dedicated to ODL delivery. Franchised International mode on the other hand is whereby a foreign provider of distance learning programs enters into partnership with a local tertiary institution to offer these programs on a joint basis, and Unfranchised International mode is whereby an established distance learning facility or “virtual university” offers courses internationally, generally using the internet and interactive e-mail to reach its distributed learners. The advantages and disadvantages of open and distance learning models are briefly described in Table 4.1.

**Table 4.1 Models of Open and Distance Learning**

<b>Mode</b>	<b>Advantages</b>	<b>Disadvantages</b>
Dual	<ul style="list-style-type: none"> <li>• Enables broadening of curriculum</li> <li>• Allows courses to be taught when staff especially the teaching staff are on vacation or when academic positions are unfilled</li> </ul>	<ul style="list-style-type: none"> <li>• Distance instruction tries to borrow heavily from residential mode</li> </ul>
Single	<ul style="list-style-type: none"> <li>• A strong specialist staff</li> <li>• Absence of institutional resistance to a new and different form of instruction</li> <li>• The institution's potential to serve students from more than one country</li> </ul>	<ul style="list-style-type: none"> <li>• Requires a sizable initial investment to be properly established</li> <li>• Its graduates may be viewed as separate from and therefore not equal to the existing residential institutions</li> </ul>
Franchised International	<ul style="list-style-type: none"> <li>• Does not require a lot of local expertise in order to get started</li> <li>• The course content may be more attuned to international trends and requirements.</li> <li>• It can be supported by international technical (and possibly even financial) assistance</li> </ul>	<ul style="list-style-type: none"> <li>• It may be less adapted to local needs</li> <li>• It may not be very accountable to local quality assurance mechanisms</li> <li>• It may be more expensive than locally developed programs</li> </ul>
Unfranchised International	<ul style="list-style-type: none"> <li>• Little or no action is required by local governments or institutions</li> <li>• Students can study without leaving home or job, and without having to raise the funds necessary to study abroad</li> </ul>	<ul style="list-style-type: none"> <li>• Possible lack of quality control and the associated risk of disreputable providers</li> <li>• Possible differences in educational culture between sending and receiving societies</li> </ul>

*Source:* Perraton and Lentell, 2004

Open and distance learning within a dual-mode university can be organized in one of two ways. One is the specialist institute where a core group of specialist staff, drawing upon content expertise from university departments, undertake to design courses, produce materials, and oversee their distribution and use. A second approach is the coordinating unit which functions as a liaison between students and university departments that directly produce and offer distance learning courses. This is the model that is being employed by universities in Kenya.

The public universities in Kenya apply the dual mode of delivery and the country is yet to have a national open university though it has been proposed by a number of education commissions seeking to find a solution to increased demand for higher education in Kenya. It is, however, important to recognize that the dual mode is in most cases limited and is only able to accommodate a certain number of learners and thus not the best option in solving the problem of increased demand for higher education in Kenya.

Kenya has not taken advantage of provision of education through an open university even though there have been uncoordinated efforts by individual universities to offer programmes in open and distance learning. The private universities for example, are providing open and distance learning programmes using the authority granted them in the charter for traditional programmes. No private provider so far has attempted to establish open and distance learning programmes independently and again the Universities Rules and Regulations

(1989) do not provide for that. There are, however, a number of external providers who have come in to fill a gap which exists in open and distance learning that needs to be addressed.

#### **4.3 Status and Institutional Guidelines of Open and Distance Learning in Kenya**

Open learning in Kenya was first started through the Board of Adult Education Act in the year 1965. This was started majorly to provide training to a number of untrained teachers at the beginning of the country's independency. This provided certificate courses to the untrained teachers as the necessary qualifications required of them. At the time also, there were quite a number of P3 and other lower qualification teachers who needed to upgrade their skills in education and the programme came in handy. This programme was sponsored by the United States Agency for International Development (USAID) which sponsored the development of materials and training of some lecturers involved in the programme delivery. The eradication of illiteracy declaration by the then President Moi in the year 1978 saw the introduction of adult education certificate courses still under the University of Nairobi, Faculty of External Studies. This initially saw a group of about three thousand (3,000), which, at the time was considerably a big number of adult learners go through the programme.

#### **4.3.1 University of Nairobi ODL**

By the year 1976, the University of Nairobi had developed an interest in starting degree programmes through open and distance learning. A team from the United Kingdom was commissioned by the government in the same year to review our system of education and look into the possibility of starting the open and distance learning degree programmes. The team's recommendations are contained in the document on a feasibility report on the first degrees by external studies prepared by the Open University Team, University of Nairobi in February, 1976. The recommendations were however not implemented and in the year 1983, the University revisited the idea by setting up a task force to look into the possibility of starting open and distance learning degree programmes. The task force report recommended the provision of Bachelor of Education (B.Ed) Arts, Bachelor of Law (LLB) and Bachelor of Commerce (B. Com) degree courses and suggested a structure through which they could be started progressively. The Bachelor of Education (Arts) was started two years later and was sponsored by the British Council which donated books, teaching materials and offered training to a team of six lecturers on open and distance learning in the United Kingdom. Other programmes did not however take off until much later. For instance, the Bachelor of Education (Science) through distance learning was introduced in the year 2004. In the year 2005, the University started offering Bachelor of Science through open and distance learning. The University, in an effort to expand its open and distance learning programmes created the open and distance learning centre at the

University's Kikuyu campus to assist other departments to offer academic programmes through open and distance learning.

Among the programmes that have been developed through open and distance learning is Master of Education whose first group of students was admitted in the year 2006 and the Post-Graduate Diploma in Education. These programmes are yet to fully develop as distance learning programmes and are still using a great deal of face-to-face interaction with a few learning materials developed for the students to study at home. The creation of a Centre for Open and Distance Learning (CODL) has enabled the University's School of Commerce to start the degrees of Bachelor of Commerce, and Bachelor of Business Studies both of which were to be rolled out from August, 2008. The Faculty of Arts has also been enabled to start Bachelor of Arts (BA) degree by distance which will cover ten programme areas.

Besides its institutional programmes, the University of Nairobi has been able to offer various programmes some of which in collaboration with other organizations. For instance, the University's Centre for Open and Distance Learning, in collaboration with the Commonwealth of Learning secretariat offers youth development programmes to Kenyan learners on community leadership. The programme targets non-governmental organizations, teachers and church leaders among other groups. Those who go through the programmes have been graduating with certificates under the Open University of Tanzania but then the University of

Nairobi was in the process of starting to offer the courses independently. Professional certificate in distance learning originally provided through the Open University of Tanzania already is being provided by the University of Nairobi through the Centre for Open and Distance Learning.

The University was at the time of the study in the process of starting Bachelor of Commerce, Bachelor of Law, Bachelor of Nursing (to offer training to nurses with diplomas and who are attached to various hospitals in the country), and an Executive Master of Business Administration. In collaboration with the School of Health Sciences, the Center for Open and Distance Education was at the same time developing HIV and AIDS, and guidance and counselling training materials. The University uses print media to deliver instruction with some electronic media like the audio cassettes and is in the process of developing online materials. Courses like the executive Master of Business Administration would most likely rely heavily on the online programmes given that it is meant to target those already on the jobs and thus have access to computers with internet connections.

In addition, the University of Nairobi has facilitated other universities in the continent to develop open and distance learning programmes like the Open University of Zimbabwe; Tanzania Open University which used materials on Bachelor of Education Arts borrowed from the University of Nairobi to develop three additional programmes, Bachelor of Arts, Bachelor of Commerce and

Bachelor of Business Studies; Makerere University; University of South Africa; and Botswana. The University has also participated in in-house material development training for staff in Kenyatta University. Other universities which were being trained in open and distance learning material development include Egerton University, Maseno University, Masinde Muliro and Moi Universities which, at the time of the study, were seeking to implement the programmes.

#### **4.3.2 Kenyatta University ODL**

Kenyatta University was started in the year 1965 as an institution of higher learning, then known as Kenyatta College, a teacher training institution that was later elevated to a constituent college of the University of Nairobi in the year 1970. In 1985, the college became a fully-fledged University through an Act of Parliament. Like the University of Nairobi, Kenyatta University offers open learning to students especially the teachers who want to further their studies through continuing education programme. This programme has flexible admission criteria and the students, who were initially met for instruction at their respective centers till the year 2003 now meet at the university over the April, August and December holidays when the schools are closed since most of them are teachers. This open learning programme does not have all the components of distance learning as the learners do not go through mediated learning and have to meet at the residential campuses for instruction and evaluation. The University started offering distance learning in the year 1997 through the African Virtual University,

which started the programme on pilot basis using Kenyatta University and Egerton University in Kenya. The African Virtual University Programme, through the use of satellite technology, offered programmes directly from universities in the United States of America to students in eight countries (Ethiopia, Ghana, Kenya, Mozambique, Rwanda, Tanzania, Uganda and Zimbabwe) in Africa. The programme has since changed its mandate from providing distance learning directly to learners to that of providing training to staff involved in open and education in the Anglophone Africa.

Open and distance learning at Kenyatta University was started in the year 2002 through the Institute for Open Learning. At the beginning, the University borrowed a lot of experience and materials from the developed open and distance learning universities outside the region key among them India's Indra Gandhi Open University. The University has since developed its own materials using the internal faculty staff. The University has also set up centres in all the eight provinces in Kenya that are used as open and distance learning students information centres, students support centres, and guiding and counseling units. The current total enrolment stands at two thousand, eight hundred and fifteen students who receive programmes that are also offered through the residential mode of education. Basically, all the schools in the University, School of Education, School of Humanities and Social Sciences, School of Pure and Applied

Sciences, School of Environmental Studies and Human Sciences and School of Business Studies do offer their programmes through open and distance learning.

#### **4.4 Criteria for Admission into Open and Distance Learning**

Open and distance learning programmes can increase access to education by reaching out to four commonly excluded groups. These are secondary school graduates who fail to gain admission to the university, married women with household responsibilities, geographically isolated or uprooted students like the refugees, and economically disadvantaged communities. Of these, the largest and most rapidly growing group is composed of secondary graduates who were unsuccessful in the competitive admission to the residential mode of delivery. According to Saint (1999), open and distance learning can also extend university education opportunities to students in rural areas, small towns or refugee camps who do not have convenient access to tertiary institutions. Table 4.2 gives the criteria for admission into ODL programmes in both University of Nairobi and Kenyatta University.

**Table 4.2 Criteria for Admission into ODL in Kenya**

Programme	Criteria for Admission	
	University of Nairobi	Kenyatta University
Certificate	C (Minus) OR KCE/EACE Div.IV with certificate in adult education	C (Minus) OR D (Plain) with work experience and/or bridging course
Diploma	C (Plain) OR C (Minus) with a professional certificate	C (Plain) OR C (Minus) with certificate and 2 years work experience
Bachelors	C (Plus) OR C (Plain) with diploma and/or S1 certificate	C (Plus) OR C (Plain) with diploma and 2 years work experience
Masters	2 <sup>nd</sup> Lower OR a pass degree with 3 years work experience	2 <sup>nd</sup> Upper OR 2 <sup>nd</sup> Lower with 2 years work experience

Whereas one has to attain a minimum of C (plus) to join the regular residential programmes) in Kenya, ODL programmes can admit lower qualifications so long as one has a professional certificate or experience as indicated in Table 4.2.

The changing technologies and increasing new knowledge have created need for lifelong education for those in employment, which cannot be availed through the

residential mode without taking time off from work and social responsibilities. In addition, the effects of HIV/AIDS, child labour and a poverty index level of about 51% according to a World Bank Report of the year 2000 amongst the majority of Kenyans have led to a high drop out rate in all the sub-sectors of education. There is also an increasing demand for in-servicing of teachers and other professionals to enable them improve their skills and cope with new and emerging needs brought about by technological and economic changes.

The government's constrained budget can neither allow it to increase further access to education using the residential mode nor continuously increase the allocation to education at the expense of other sub-sectors of the economy. It is, therefore, not practicable to continue largely depending on the current residential educational system, which cannot accommodate all those students who qualify for university education. The open and distance learning programmes in Kenya are taking into account the need for continued learning with other work and social responsibilities and those who drop out of the system due to various reasons by relaxing the admission criteria from the immediate O level age group to include those who did not attain the pass mark to join university but have gained some experience through employment.

As shown in Figure 4.1 which gives the age brackets of those registered in open and distance learning in the University of Nairobi and Kenyatta University, most

students registered in the programmes were aged between 25 and 40 years which are beyond the residential age group of between 18 and 24 years.

**Fig. 4.1 Percentage of Open and Distance Learning Students' Age in Years**

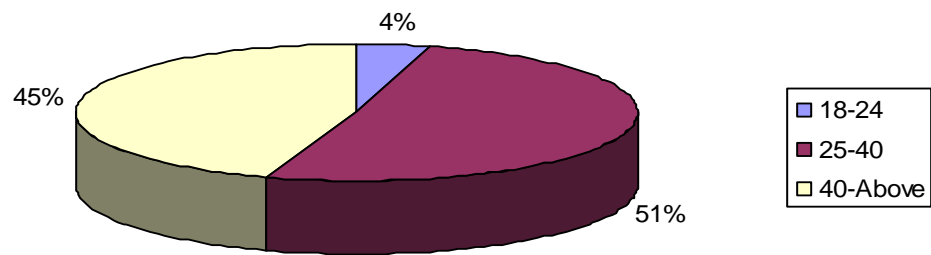


Figure 4.1 shows that a greater percentage, 51% and 45% of the open and distance learning students who participated in the study were aged between 25 and 40 and above years respectively. These groups represented the working class people and those who were beyond the residential programme students' age group of between age 18 and 24 years.

The capacity of these institutions was however limited and they were not able to meet the demand. For example, not all of those seeking admission to open and distance learning in the University of Nairobi got to be admitted in a year due to limited capacity. Even though most of the universities, Moi, Egerton, Maseno and Masinde Muliro were preparing to start the open and distance learning

programmes, the issue of adequate, quality supply of the programmes may not be fully addressed because they are already running residential modes and would incorporate the programmes as dual mode institutions.

By time of the study, Kenya did not have a national open and distance education university and efforts by leading distance education experts in the country to influence decision makers to tackle a bill in Parliament on a National Open University had not been successful.

It is also important to note that with sufficient support, open and distance learning could be a viable option for impoverished or socially marginalized communities. This is because it allows students to work and study simultaneously, and because it does not require the additional costs of campus residence, distance learning offers an alternative pathway to university training for students with limited financial means.

#### **4.5 Equity in Programme Delivery across Geographical Locations**

This question was meant to collect information on whether open and distance learning delivery was consistent and appropriate across all the geographical locations, Nairobi, Nyanza and North-Eastern Provinces representing the urban, rural and hardship areas respectively.

When lecturers who facilitate ODL programmes were asked whether they felt that programme delivery was appropriate and consistent across all the geographical locations, majority of the respondents felt that the programme delivery was not consistent across all the regions. For instance, only 63 (24.5%) of the respondents said that the open and distance learning programmes delivery was consistent across all the geographical regions while 194 (75.5%) felt that there were disparities in the programmes delivery across the geographical regions. Table 4.2 illustrates this.

**Table 4.3 Lecturers Opinion on the Consistency of ODL Delivery across Geographical Locations (n = 257)**

Response	N	%
Yes	63	24.5
No	194	75.5
Total	257	100.0

Those who said that there was no consistence argued that even though the materials used in the delivery of the programme in the locations were the same and that they were facilitated by the same lecturers, there existed a difference between the attention given to those in the urban centres, who are closer to reach and those who are far from the urban centers. This was attributed to the fact that the

materials like the modules they mostly relied on did not get ready in time which meant that there was need to check regularly with the programmes administration to find out when they got ready. This in essence means that those in the urban centres who have no problem with infrastructure like the road and communication network accessed the materials early enough and had enough time to study before the examinations which usually took place at the same time in all the regional centres. Students from the other areas, few of whom got access to the materials, were left with little time of studying the materials thus putting them at a disadvantage.

The other problem cited is in connection with evaluation of the students of open and distance learning. The respondents also argued that the continuous assessment tests and the assignments given to the students in the rural and especially the hardship regions took quite long to get to the facilitators. This was also attributed to the fact that there is poor communication and road network. They also blamed this on lack of seriousness among the authorities concerned with coordinating the entire process of evaluation.

This information was corroborated by the opinion of open and distance learning students on the evaluation process. These students also indicated that there were disparities mostly in receiving feedback on their tests and assignments since most

of those who received feedback on assignments more regularly were from the urban centres. Figure 4.2 shows their response.

**Fig. 4.2 Students Opinion on ODL Evaluation**

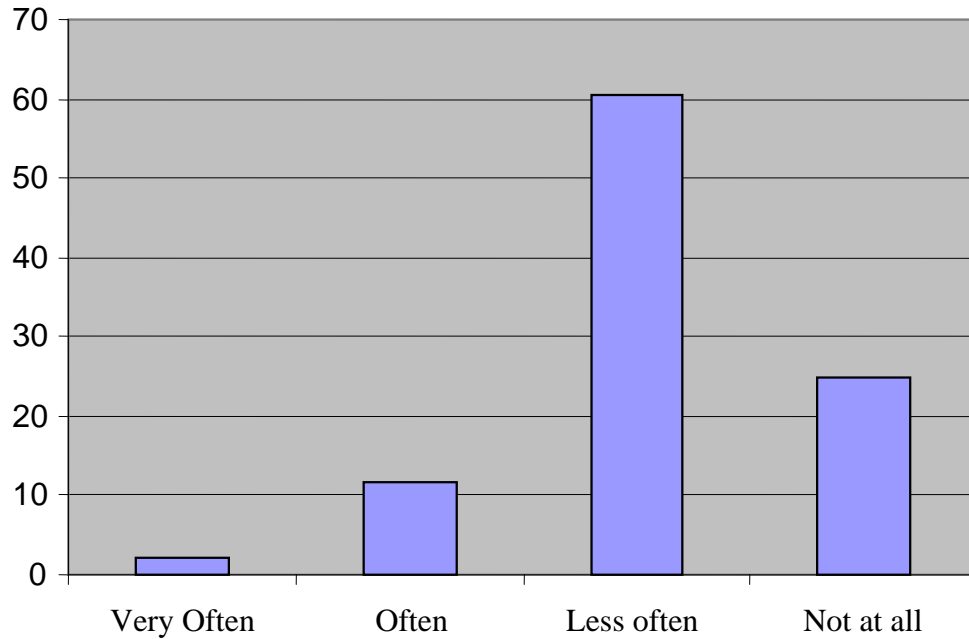


Figure 4.2 shows that the biggest percentage, 60.4% of the students registered in open and distance learning in Kenya's public universities received feedback on their end of semester examinations, assignments and continuous assessment tests less often while 24.8% did not receive feedback at all. It is also important to note that a greater percentage, 95% of the students who said that they did not get feedback at all and those who said that they received feedback less often were from North Eastern Province followed by Nyanza Province.

#### 4.6 ODL Programmes Staffing

On staffing, the study sought to establish the levels of staffing and their training in ODL delivery techniques. The study found that the open and distance learning programmes offered by the two institutions, relied heavily on staff who facilitate the residential mode programmes. This is however expected in institutions running the programmes in dual mode. They were assisted by staff hired on part-time basis to facilitate the open and distance learning programmes but no staff, especially teaching, were employed on full-time basis to particularly facilitate open and distance learning programmes in both institutions. Table 4.3 gives the composition of staff in open and distance learning in terms of their contracts.

**Table 4.4 Open and Distance Learning Staff Contracts**

Employment Status	n	%
Full time	0	0
Part time	125	48.6
Residential Staff	132	51.4
Other	0	0
<b>Total</b>	<b>257</b>	<b>100.0</b>

Table 4.3 indicates that among the lecturers who responded in the study, 125 (49%) were hired on part-time basis to facilitate open and distance learning delivery in the two institutions and 132 (51%) were lecturers who facilitate residential mode programmes who were contracted to facilitate the open and distance learning programmes delivery. Dual-mode approach that makes use of existing academic staff and facilities like the case of universities in Kenya has been recommended by some studies as it reduces the competition for scarce resources often associated with the establishment of a new institution, and erode staff resistance by offering opportunities for direct participation.

The study tried to establish whether the teaching staff who facilitated these programmes had been given special training on the delivery of open and distance learning. It is important to note that well-trained and competent staff is the foundation stone upon which all other distance learning activities are erected. Yet in the effort to get distance learning programmes into operation in Kenya, insufficient preparation time and funding as been given to staff training. Moore and Kearsley (1994) recognize that a good training programme for open and distance learning instructors would include: practice in the design, production and presentation of materials; ample hands-on practice with delivery technologies; practice with techniques in how to humanize a course; and practice with techniques for facilitating student participation. Few of the study respondents

acknowledged having received training on delivery of this mode of education as illustrated in Figure 4.3.

**Fig. 4.3 Teaching Staff Training on Open and Distance Learning Delivery**

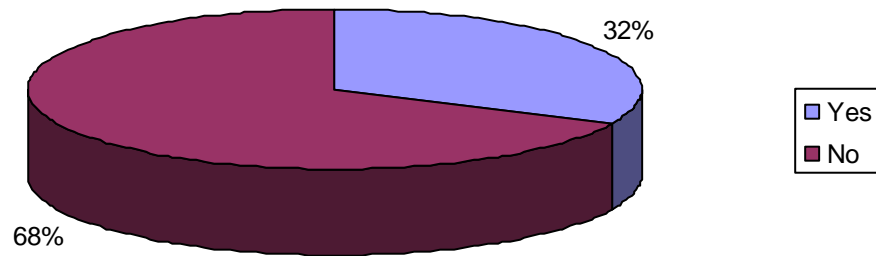


Figure 4.3 indicates that only 32% of the two hundred and fifty seven respondents had special training on the delivery of open and distance learning. These lecturers had received training through in-house workshops that were organized mostly by the University of Nairobi, Centre for Open and Distance Learning that was actively involved in in-house training on open and distance learning material development in Kenya and other East African countries. Given that open and distance learning is generally based on an indirect teaching relationship, using fundamentally self-teaching methods with the tutor acting as a facilitator to activate the skills and situations needed for self-education, the relatively small

percentage of staff trained on open and distance learning would encourage most of the existing open and distance learning programmes to adopt patterns of traditional education delivery. This would not be appropriate for open and distance type of education.

Additionally, most of the respondents felt that the number of staff facilitating these programmes was not adequate and that additional staff were required in order to run the programmes effectively. According to the study findings, ninety per cent of the respondents felt that the level of staffing was inadequate. This they said contributed to overloading, and hence lack of adequate attention to the students in the open and distance learning, a factor that has a bearing on quality of services offered to the students. The lecturers said that they were heavily burdened with many duties because majority of them were from internal faculties and were engaged in teaching the residential programmes.

#### **4.7 ODL Programmes Funding**

The Ministry of Education spent more than twelve per cent (Kshs.14.3b) of its annual budget on university education. Consequently, according to the directors of ODL programmes who participated in the study, the larger portion of allocation to public universities catered for salaries of university staff and very little money was left for teaching/learning materials and equipment. The government did not have a department dealing with open and distance learning within the ministry and neither

did it have a distance education policy for higher education in place which made it difficult to make specific provision for open and distance learning in the overall national budget. As a result, institutes of distance learning in the universities have had to generate funds for running the programmes, general planning, coordination, supervision and evaluation of the students. In most cases, money generated from open and distance learning programmes has been used to subsidize other residential programmes according to the directors of ODL programmes who were interviewed in the study.

The study found that income generated by the open and distance learning programmes was insufficient because it could not take care of capital development. It also discovered that even though a Committee on Income Generating Activities of the University of Nairobi recommended proportions for sharing income generated from these programmes, the committee's recommendations had not been fully implemented. One of the recommendations was that about 35% of the total income generated by the University of Nairobi Module II programmes be given to the service departments to run the programmes but this had not been realized since some of the money generated was used to subsidize residential programmes. Furthermore, innovations in open and distance learning had heavily relied on unsustainable sources of funding, especially donor funding from bodies like the British Council who funded the implementation of Adult Education at the University of Nairobi and USAID programme who funded

upgrading of skills for the lowly qualified and P3 teachers through the University of Nairobi Faculty of External Studies. It is also worth noting that most of the open and distance learning programmes have been launched as a means of generating income to supplement the declining budgetary allocations to the public universities.

#### **4.8 ODL Programme Resources**

The open and distance learning programmes in the two universities studied mainly used printed materials for instruction and supplementary materials such as audio-cassettes, video cassettes, slides and experimental kits which would reinforce each other in achieving the desired goals were generally not in use especially due to lack of funds. The institutions lacked study guides which would give a broad view within a context of the courses to be studied.

Apart from the University of Nairobi, which owned resource centres in all the provinces, Kenyatta University owned physical facilities in Nairobi's Ruiru and Parklands Campuses and Mombasa Campus. In the rest of the provinces, the University utilized rented facilities. These resource centres constitute an important base for transmitting content. They are meant to provide facilities for learning for individual and group tutoring and academic guidance and counselling. The open and distance learning students who responded in the study felt that the centers were not doing enough since they had to travel all the way to the head offices to

get study materials. They also felt that the centres did not do enough in facilitating individual or group tutoring and academic guidance and counseling. Table 4.4 illustrates their response.

**Table 4.5 Students Response on the Use of Resource Centres**

Response	n	%
Very effective	23	3.7
Effective	192	30.6
Not effective	413	65.7
Total	628	100.0

According to Table 4.4, only 23 (3.7%) of the respondents said that the centres were used very effectively, 192 (30.6%) felt that the resource centres were used effectively while 413 (65.7%) felt that the centres were not used effectively in providing the student support services.

Production of high quality open and distance learning materials for the country's university programmes appears far more expensive because the cost would include the design of the curriculum and course authors' fee, remuneration of review and

assessors and the tremendous effort devoted to the presentation of the final product using graphics language and layout style. Staff members were thus forced to use curriculum and study materials meant for residential model of education, which cannot effectively communicate to the learners separated from their tutors. Besides, teaching staff members did not have access to modern libraries. The institutions were faced with lack of current journals and publications in distance learning and were unable to adequately subscribe to publications due to limited funds available in universities. The programmes also failed to benefit from economies of scale because of the relatively small numbers (8,215) of students enrolled in the programmes.

Computer resources, both hardware and software which are very crucial in open and distance learning are expensive for many universities in Kenya to afford in reasonable quantities and quality. Technology being very dynamic, universities in Kenya cannot cope with the changes in terms of cost and relevancy yet quality open and distance learning can only be achieved through effective application of information technology. The Internet forms technological breakthrough in open and distance learning tools and advances in the internet concerning access and quality of information are fundamental for making open and distance learning efficient and effective as an innovation in higher education in Kenya. This has not yet been achieved and the ODL programmes in Kenya only supplemented printed materials with audio cassettes.

#### **4.9 Cost of Open and Distance Learning Programmes**

Open and distance learning would be considered cost-efficient in four ways. First, it lowers the costs of university education for students since they do not have to give up income from employment in order to study; they pay no residential fees or commuting costs; and since cost-sharing in higher education is practised in Kenya, tuition charges for open and distance learning are expected to be less than those for residential instruction.

Open and distance learning often operates at more efficient staff/student ratios, thereby reducing the proportion of institutional budgets dedicated to staff salaries. Similarly, it minimizes the need for investment in costly physical facilities and in their maintenance, thus enabling more funds to be used in support of teaching inputs and learning activities. These efficiency gains, however, must be won through careful planning and creative management. Many factors combine in complex ways to influence the costs of open and distance learning. For example, Rumble (1997) estimates that up to 100 hours of course design and development time are necessary for each hour of student learning time even though this ratio varies widely in practice. In comparison, good quality classroom teaching can be provided for 10 hours of preparation time for one hour of learning.

Other factors which condition course costs include the useful life of the course, the number of students enrolled, the type of delivery system used noting that costs rise

sharply when a medium other than print is used, the nature of academic assessment, the kind and extent of student interaction, and the levels of expertise employed in the design, development and delivery of courses. Kenya, even though it benefits from the use of print material which is considered cost-effective, the universities that participated in the study lose out on economies of scale because of the relatively low enrolments 5,400 students at the University of Nairobi and 2,815 students at Kenyatta University.

Unlike the traditional residential mode, university open and distance learning offers declining marginal costs. As enrolments rise, the cost per student goes down. The programme could also be cost-efficient because it employs a modular approach where course materials can be updated or modified to suit particular types of students without the need to reproduce them in their entirety. This flexibility becomes a more significant advantage as university education in the 21<sup>st</sup> century confronts the challenge of serving an increasingly diverse pool of students with an expanding range of learning requirements.

According to Kinyanjui (1994), open and distance learning promises a quality, relevant education for the masses which can effect educational and social change at a less expense than residential education. At the time of the study, there was no documented evidence on the unit cost per student in open and distance learning in Kenya's higher education. The study found that the students registered in open and distance learning paid slightly lower than their counterparts in the residential

mode. Their course charges ranged from Kshs.100,000 per annum for the arts courses to Kshs.110,000.00 per annum for the science courses. The health courses were charged at Kshs.220,000.00 per annum. Similar courses taught the residential mode students ranged from Kshs.180,000 per annum for the arts courses to about Kshs.550,000.00 per annum for the health sciences.

Most of the students who responded in the study however still felt that the programmes were not cost-effective. They felt that the amount and quality of services they received in these programmes did not correspond with the amount of fees they were charged. Figure 4.4 illustrates their response when asked whether in their opinion the programmes were cost-effective or not.

**Fig. 4.4 Cost effectiveness of the Open and Distance Learning Programmes as Perceived by the Students**

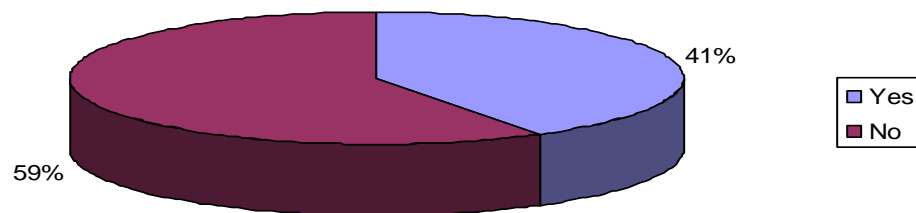


Figure 4.4 indicates that 257 (59%) of the students who responded in the study felt that the amount and quality of services they received through open and distance

learning were lower than the fees they were charged. They also felt that they spent a lot of money having to travel when going for the modules, and visiting the main campus for orientation and examinations for the University of Nairobi ODL Students.

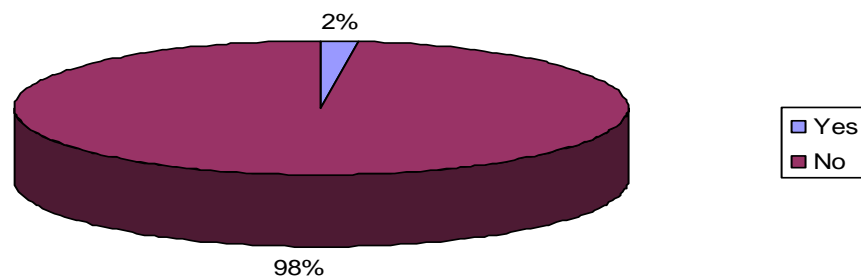
Generally, open and distance learning programmes could be considered cost-effective given that the amount of fees they were charged per course per annum was lower than that payable by residential mode students. This is considering that the fees charged was inclusive of accommodation fees for the periods they were hosted by the institutions for orientation, introductory tutorials and end of semester examinations. Furthermore, the students registered in these programmes benefited because they did not have to leave work to attend residential mode of learning thus no forgone income, they also did not incur the costs of regular transportation and accommodation charges, and like their counterparts in the residential programme, they enjoyed a subsidy in the meals they took while hosted in the institutions.

A factor that had not been given consideration, however, was the sponsorship of the students pursuing open and distance learning programmes. The study discovered that while the University of Nairobi Open and Distance Education Policy recommended sponsorship of these students through student loans and bursaries for students from poor socio-economic backgrounds, this had not been achieved. Their counterparts in the residential mode benefited from student

bursaries and student loans disbursed by the Higher Education Loans Board (HELB) but the students in Open and Distance Education programmes were not given an equal opportunity and only started benefiting from 2008/2009 academic year. Whereas the regular students acquired loans regardless of their employment status and only started paying after completion of their degrees at the an interest rate 4% per annum, the open and distance learning programmes students only benefited from the loans if they had salaried employment and started paying soon after disbursement of the loans at an interest rate of 12% per annum.

The students' information on amount and quality of services they received was corroborated with that from lecturers who participated in the study. Majority of the lecturers who responded in the study, and whose response is as shown in Figure 4.5, felt that a lot needed to be done for quality to be realized in the provision of open and distance learning in Kenya.

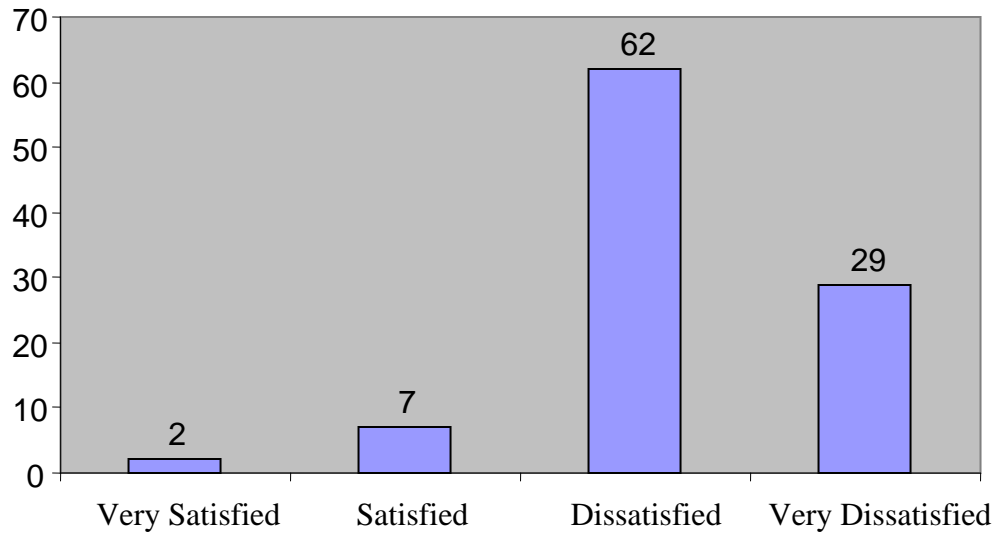
**Fig. 4.5 Percentage of Quality of Services Provided to Students in Open and Distance Learning**



According to Figure 4.5, only a negligible 5 (2%) responded positively otherwise most of them 252 (98%) indicated that indeed, the students were not receiving proper quality and amount of services that they ought to receive. This contrasts the knowledge that open and distance learning fosters educational quality and relevance because teacher and student are separated by distance and therefore successful curriculum design ensures clarity of communication, coherent logic and good organization in its presentation. This increases the effectiveness of its pedagogy and, where the distance learning courses are prepared by contracted classroom lecturers, often contributes to improved face-to-face instruction as well. In addition, by using standardized materials developed by subject experts, it is expected to promote quality assurance and equitable educational provision.

#### **4.10 Satisfaction of Participants in Open and Distance Learning**

Satisfaction in any service delivery is important and it acts as an indicator of the quality of service provided. students who are consumers of the open and distance learning programmes were asked about their level of satisfaction and motivation. The study revealed that most of the respondents had very low levels of satisfaction. Figure 4.6 shows the level of satisfaction of students in open and distance learning.

**Fig. 4.6 Levels of Satisfaction of Students in Open and Distance Learning**

There were quit high levels of dissatisfaction among students registered in open and distance learning in universities in Kenya as shown in Figure 4.6. Out of six hundred and twenty eight students who participated in the study, three hundred and ninety (62.1%) of them were dissatisfied with the programmes organization and delivery, one hundred and eighty (28.7) were very dissatisfied while only about nine (9%) said they were satisfied with the programmes delivery and organization. A number of lecturers who responded in the study also felt that the programmes organization and delivery were wanting as illustrated in table 4.5.

**Table 4.6 ODL Programmes Organization and delivery**

Programmes Organization	N	%
Organized	37	14.4
Not organized	220	85.6
Total	257	100.0

According to Table 4.5, only 37 (14%) of the lectures who responded in the study felt that the programmes were well-organized otherwise the rest, 220 (87%) were of the opinion that a lot needed to be done to improve the programmes. To have well-organized open and distance programmes, all parties involved in national educational development efforts must recognize that open and distance learning is fundamentally different in its structure, organization and delivery than residential face-to-face instruction. It is based upon a specialized division of labour in the development and provision of courses. It requires an appropriate technology to mediate between teacher and student because the two are separated by time and distance. These differences call for specialized processes for learning design, specialized techniques of instructions, and specialized organizational structures which are very different from residential university institutions. The study also tried to establish whether the location of the students played any role in their satisfaction and their responses are as illustrated in Table 4.6 which is a cross-tabulation between location and satisfaction of ODL students.

**Table 4.7 Location of Students and their levels of Satisfaction (n = 628)**

Location	Levels of Satisfaction				Total
	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	
Nairobi	11 (3.7%)	28 (9.8%)	244 (86.1%)	1 (.4%)	284 (100.0%)
Kisumu	0 (.0%)	19 (8.8%)	123 (57.7%)	71 (33.5%)	213 (100.0%)
Garissa	0 (.0%)	0 (.0%)	21 (16.4%)	110 (83.6%)	131 (100.0%)
Total	11 (1.8%)	47 (7.5%)	388 (61.8%)	182 (28.9%)	628 (100.0%)

According to Table 4.6, 244 (86.1%) of students from Nairobi, 123 (57.7%) from Kisumu and 21 (16.4%) from Garissa were dissatisfied with the programmes delivery, while 1 (0.4%) of the student respondents from Nairobi, 71 (33.5%) from Kisumu, and 182 (83.6%) from Garissa said that they were very dissatisfied with the programmes organization and delivery. This means that the disparities in delivery of open and distance learning across the geographical regions were affecting students satisfaction negatively.

The study also sought to find out the level of motivation of facilitators in open and distance learning programmes. Most of those who responded to the questionnaire for the lecturers felt that they were not motivated enough in facilitating the programmes. Their responses are illustrated in figure 4.7.

**Fig. 4.7 Level of Motivation of Lecturers in Open and Distance Learning**

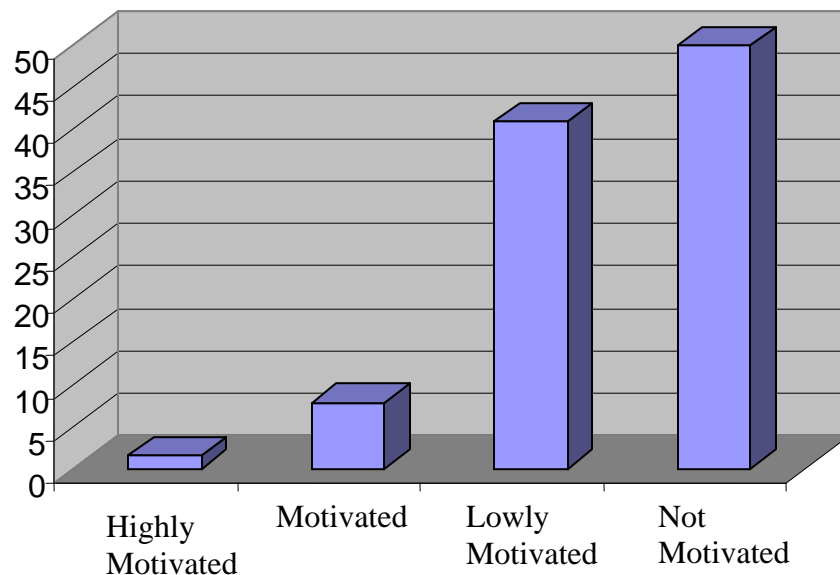


Figure 4.7 shows low levels of motivation among the facilitators of open and distance learning in the country with only about 10% of the respondents saying they were motivated in carrying out their duties in open and distance learning. Most of the respondents attributed their low levels of motivation to inadequate resources especially the modules used in the programmes. They also felt that the workload was too much given that they were the same lecturers facilitating the residential mode of education among other responsibilities like research and publications. The facilitators also raised the issue of compensation with the

majority feeling that it was too low compared to the workload and the time they put into provision of these services. According to the study findings, more than 90% of the facilitators who responded were not satisfied with the level of compensation they received for facilitating the open and distance learning programmes.

Open and distance learning facilitators were in two contract categories according to the study findings. These were the facilitators hired to offer services on part-time basis and those who were lecturers in internal departments and were seconded by various departmental heads to offer their services to open and distance learning students. The study went further to establish whether there existed any relationship between the facilitators contracts and their levels of motivation as shown in Table 4.7.

**Table 4.8 Levels of Motivation of Staff in Open and Distance Learning  
(n=257)**

Employment Status	Levels of Motivation				Total
	Highly Motivated	Motivated	Lowly Motivated	Not Motivated	
Part time	2 (1.6%)	11 (8.8%)	48 (38.4%)	64 (51.2%)	125 (100.0%)
Residential Staff	2 (1.5%)	9 (6.8%)	57 (43.2%)	64 (48.5%)	132 (100.0%)
<b>Total</b>	<b>4</b> (1.6%)	<b>20</b> (7.8%)	<b>105</b> (40.9%)	<b>128</b> (49.8%)	<b>257</b> (100.0%)

According to Table 4.7, only about 2% of lecturers, both full-time and part-time were motivated in facilitating the open and distance learning programmes while about half the lecturers, both residential and part-time lecturers were not motivated in facilitation of the programmes.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Summary**

The two universities which participated in the study, the University of Nairobi and Kenyatta University apply the dual mode education delivery. The universities have developed open and distance learning programmes to supplement the residential mode. In the year 1966, an Act of Parliament was passed that saw the establishment of the Board of Adult Education. This Act was prompted by urgent demand for adult education and especially for teacher training following the country's independence in the year 1963. The programmes have however evolved over time, and just like the evolution of open and distance learning in many parts of the world, the University of Nairobi and now joined by Kenyatta University are offering these programmes not only as open learning but as open and distance learning to both the adults and the working class, and also the cohort of between ages 18-24. This is the cohort that was traditionally only considered for the residential mode. Printed material each covering unit content equivalent to thirty five one-hour lectures are covered per semester which are marked by end of semester examinations.

##### **5.1.1 Models of Open and Distance Learning in Kenya**

It is important to integrate open and distance learning fully within the existing formal education system in a dual mode of delivery that is adopted by universities

in Kenya. Where this is not accomplished, however, according to Willis (1994) the danger is that open and distance learning would remain at the periphery of the educational system, under-valued and under-used. Full integration helps to reduce inevitable resistance to innovation within existing tertiary institutions and does much to overcome the perception that distance learning is somehow an inferior product when compared with residential instruction. Dual-mode approaches that make use of existing academic staff and facilities like the case of universities in Kenya reduce the competition for scarce resources often associated with the establishment of a new institution. Likewise, common admissions policies for residential and distance learning students, together with the award of a single institutional degree based on common standards, does much to offset the notion that open and distance learning is of inferior status. In this mode, the institutions get overwhelmed running more than one programme and may not be appropriate in the event that the country is experiencing increased demand for higher education beyond the government's ability to support.

Delivery of the ODL programmes included face-to-face teaching, audiocassettes; library services other teaching/learning materials, which include identified key textbooks in each unit and the use of modules which formed the largest part of these programmes delivery. Face-to-face teaching and learning included residential sessions for orientation, tutoring and counseling at the study centres. The two universities in the study used their provincial centres referred to as extra-

mural centres by the University of Nairobi as student support centres. The resource centres provided facilities for learning and for individual and group tutoring and academic guidance and counselling. They also served the basic function for information provision and distribution of study materials. It is clear that the institutions had not fully engaged the use of information and communications technology to match the major players in the field of open and distance learning. This factor has been attributed to the fact that the country is not technologically up-to-date and thus the residents especially those living in rural areas have no access to Internet and telephone services that can support the programmes.

The examination mode included continuous assessment tests in the form of written assignments, semester tests, demonstration projects and a written examination for the end of each semester. To graduate a student requires passing 48 units, equal to the residential mode of study units.

The media used in open and distance learning in the University of Nairobi and Kenyatta University could be classified as print (paper) based open and distance learning. Even though there were other support components built into the course, print materials were the primary delivery strategy. The print materials were in the form of study lecture units or modules, course notes, and practical guides. Numerous studies from around the world have indicated that medium of

instruction does not make any important difference in student achievement, attitudes or retention. In fact, how the media are used has proven to be more important than which medium is selected. Furthermore, multiple media appear to be more effective than a single medium, with interactivity between students and tutors contributing a major boost to learning. Since the choice of technology does not influence learning, then the factors of technology cost and maintenance become determining considerations. On this basis, print media are likely to remain the best choice for the country. They are inexpensive, reliable and are readily used by students without requiring them to have access to specific equipment or services that are currently scarce and not easily accessible by most Kenyans. At the same time, care is needed to avoid commitment to inflexible technologies chosen without reference to educational need and context, unexpectedly high operating costs, and under-estimation of the needs for good pedagogical practice and strong student support systems.

### **5.1.2 Criteria for Admission into Open and Distance Learning**

The open and distance learning programmes in Kenya were taking into account the need for continued learning with other work and social responsibilities and those who drop out of the system due to various reasons by relaxing the admission criteria from the immediate O level cohort to include those who did not attain the pass mark to join university through residential mode but had gained some experience through employment.

The high demand for university education in Kenya (79% of those who qualify annually do not gain access to residential university education), when coupled with widely varying quality in educational preparation at the secondary level, suggest that admission to university open and distance learning programmes should be selective, at least for the time being. Selectivity based on student qualifications or assessment of ability would make student numbers more manageable and enable higher pass rates, thereby contributing to the cost-effectiveness of ODL programmes.

### **5.1.3 Equity of Programme Delivery across Geographical Locations**

On the consistence of programmes delivery across geographical locations, the study established that there existed a difference between the attention given to those in the urban centres, who are closer to reach and those who are far to reach. This was attributed to the fact that the materials like the modules they mostly relied on were not prepared in time which meant that there was need to check regularly with the programmes administration to find out when they got ready. This in essence means that those in the urban centres who have no problem with infrastructure like the road and communication network got to access the materials early enough and have enough time to study before the examinations which usually took place at the same time in all the provincial centres. Students from the other areas, few of whom got access to the materials, were left with little time of studying the materials thus putting them at a disadvantage.

The respondents also argued that the continuous assessment tests and the assignments given to the students in the rural and especially the hardship regions took quite long to get to the facilitators. This was also attributed to the fact there is poor communication and road network. They also blamed this on lack of seriousness from the authorities concerned with coordinating the entire process of evaluation. This information was corroborated by the opinions of open and distance learning students who also indicated that there were disparities mostly in receiving feedback on the test and assignments since most of those who received feedback on assignments were from the urban centres.

#### **5.1.4 ODL Programmes Staffing**

On staffing, the study found that the open and distance learning programmes offered by the two institutions, relied heavily on staff from the residential departments. This is expected in institutions running the programmes in dual mode. These were supplemented by staff hired on part-time basis to facilitate the open and distance learning programmes but no staff, especially teaching, had been employed on full-time basis to particularly facilitate open and distance learning programmes in both the institutions. Dual-mode approaches that make use of existing academic staff and facilities like the case of universities in Kenya has however been recommended by some studies as it reduces the competition for scarce resources often associated with the establishment of a new institution.

The study established that most (68%) of the teaching staff who facilitated these programmes had not been given special training on the delivery of open and distance learning techniques. It is important to note that well-trained and competent staff is important in providing quality open and distance learning yet in the effort to get open and distance learning programmes into operation in Kenya, insufficient preparation time and funding as been given to staff training. A good training programme for distance learning instructors would include: practice in the design, production and presentation of materials; ample hands-on practice with delivery technologies; practice with techniques in how to humanize a course; and practice with techniques for facilitating student participation. Few of the study respondents acknowledged having received training on delivery of this mode of education mostly through in-house sessions conducted by the University of Nairobi Centre for Open and Distance Learning. Majority of the respondents felt that it would be important for them to receive training on the ODL delivery techniques.

#### **5.1.5 ODL Programmes Funding**

ODL programmes in public universities in Kenya are funded by the government and the learners. Some degree of cost-sharing for university distance learning programmes between students and government is an established precedent in Kenya. This practice was introduced by the Structural Adjustment Programme in the year 1997 following a World Bank recommendation based on returns attributed to education and the country's economic performance. The assumption

that open and distance learning students are employed and can afford to pay a portion of tuition costs also does justify the precedence.

The Ministry of Education spends more than twelve per cent of its annual budget on higher education. Consequently, the larger portion of allocation to public universities caters for salaries of university staff and very little money is left for teaching/learning materials and equipment. Since the government did not have an open and distance learning policy for higher education in place, there was no specific provision for distance learning in the overall national budget. As a result, institutes of open and distance learning in the universities had to generate funds for running programmes, general planning, coordination, supervision and evaluation of the programme. In most cases, money generated from open and distance learning programmes subsidized other residential programmes. Innovations in open and distance learning had heavily relied on unsustainable sources of funding, especially donor funding as earlier observed and most of the open and distance learning programmes had been launched as a means of generating income to public universities hit by declining budgetary allocations.

The study established that there was under-funding mostly in the provision of critical student support services, and in staff training and professional development. One deterrent is that open and distance learning normally requires considerable up-front investment to train staff, design curriculum, prepare materials, and acquire the

selected technology. This had not been achieved in Kenya because of financial constraints.

#### **5.1.6 ODL Programme Resources**

The two universities which participated in the study had centres in all the eight provinces in Kenya. The University of Nairobi owned resource centres in all the provinces, while Kenyatta University owned physical facilities in Nairobi's Ruiru and Parklands Campuses and Mombasa Campus. In the rest of the provinces, Kenyatta University utilized rented facilities. These resource centres constituted an important mode of transmitting information. They were meant to provide facilities for learning for individual and group tutoring and academic guidance and counselling. The open and distance learning students who responded in the study felt that the centres were not doing enough since they had to travel all the way to the head offices to get study materials. They also felt that the centres did not do enough in facilitating individual or group tutoring and academic guidance and counselling.

Production of high quality open and distance learning materials for the country's university programmes had also not been fully achieved. Staff members were thus forced to use curriculum and study materials meant for residential mode of education, which cannot effectively communicate to the learners separated from their tutors. Besides, teaching staff members did not have access to modern

stocked libraries. The institutions were faced with lack of current journals and publications in distance learning due to limited funds available in universities. The programmes also failed to benefit from economies of scale because of small numbers of students enrolled in the programmes.

Computing resources, both hardware and software which are very crucial in open and distance learning were expensive to afford in reasonable quantities and quality. Technology being very dynamic, universities in Kenya could not cope with these changes in terms of cost and relevancy yet effective application of information technology is important in ensuring quality open and distance learning.

#### **5.1.7 Cost of Open and Distance Learning Programmes**

The study found that the students registered in open and distance learning paid slightly lower (Kshs.100,000 for the arts and Kshs.110,000 for the science courses) than their counterparts in the residential model. Most of the students who responded in the study still felt that the programmes were not cost effective. They felt that the amount and quality of services they received in these programme did not correspond with the amount of fees they were charged.

Generally, open and distance learning programmes could be considered cost-effective given that the amount of fees they were charged per course per annum

was lower than that payable by residential mode students. This is considering that the fees charged was inclusive of accommodation fees for the period they were hosted by the institutions for orientation, introductory tutorials and end of semester examinations. Furthermore, the students registered in the these programmes benefit because they do not have to leave work to attend to residential mode of education thus no forgone income, they also do not incur the costs of regular transportation and accommodation charges, and like their counterparts in the residential programme, they enjoyed a subsidy in the meals they took while hosted in the institutions.

Sponsorship of the students pursuing open and distance learning programmes had not been given priority. The study discovered that while the University of Nairobi Open and Distance Learning Policy recommends sponsorship of these students through student loans and bursaries for students from poor socio-economic backgrounds, this had not been achieved. Their counterparts in the residential mode benefit from student bursaries and student loans currently disbursed by the Higher Education Loans Board (HELB) but the students in Open and Distance Learning programmes were not given an equal opportunity and only started benefiting from 2008/2009 academic year. Whereas the regular students acquired loans regardless of their employment status and only started paying after completion of their degrees at the an interest rate of 4% per annum, the open and distance learning programmes students only benefited from the loans if they had

salaried employment and started paying soon after disbursement of the loans at an interest rate of 12% per annum. This in essence means that the needy who are enrolled in distance learning and who have no salaried employment cannot access the loans extended to their counterparts in regular degree programmes.

#### **5.1.8 Satisfaction of Participants in Open and Distance Learning**

Satisfaction in any service delivery is important and it acts as an indicator of the quality of service provided. Most of the study respondents who included the students as consumers of the ODL programmes and the teaching staff who facilitated open and distance learning programmes, however, had very low levels of satisfaction. Some of the student respondents felt that their study centres were not doing enough in providing them with study materials as they had to travel to the main centres for the materials. They also felt that they did not receive adequate student support services, and they did not receive feedback on their assignments and examinations in time. Most of the teaching staff respondents attributed their low levels of motivation to inadequate resources especially the modules used in the programmes. They also felt that the work load was too much given that they were the same lecturers who facilitated the residential mode of education among other responsibilities like research and publications. The facilitators also raised the issue of compensation with the majority feeling that it was too low compared to the work-load and the time they put into provision of these services.

It is important to note that open and distance learning is fundamentally different in its structure, organization and delivery than residential face-to-face instruction. It is based upon a specialized division of labour in the development and provision of courses. It requires an appropriate technology to mediate between teacher and student because the two are separated in time and distance. These differences call for specialized processes for learning design, specialized techniques of instructions, and specialized organizational structures which are very different from residential university institutions. Universities in Kenya had not adequately recognized these unique attributes of distance learning through policy and planning initiatives necessary in expanding the use and potential benefits of this programme.

## **5.2 Conclusion**

1. The arrangement for delivery of open and distance learning in our public and private institutions is in dual mode which is only able to accommodate a limited number of learners. Kenya has not yet taken advantage of provision of education through a national open university which has the potential to increase access to higher education.

2. The study established that there existed a difference in the attention given to those in the urban centres, who are closer to reach and those who are far to reach

in terms of distribution of study materials and feedback on students assignments and examinations.

3. Both the University of Nairobi and Kenyatta University which participated in the study have physical facilities in all the provinces in Kenya. The centers are used as information centers and are meant for individual and group tutoring. The current media services used in open and distance learning in Kenya include print (postal and other delivery modes). Electronic (radio, telephone, audio tapes, CDs, TV, computers, internet) media which are important in the delivery of these programmes have not been fully embraced. There are both infrastructural and resource constraints which must be considered in the endeavour to enable students to access open and distance learning programmes in Kenya which include lack of proper road network to some parts of the country, communication infrastructure and electricity which almost make it impossible to access these programmes through electronic media.

4. Kenya did not have a national policy governing open and distance learning programmes. These programmes were being offered by various institutions governed by their own institutional guidelines. Lack of a national policy poses a challenge on ODL resource mobilization and programmes quality.

### **5.3 Recommendations**

1. Open and distance learning is generally based on an indirect teaching relationship, using fundamentally self-teaching methods, with the tutor acting as a catalyst to activate the skills and situations needed for self-education. All effective open and distance learning programmes depend upon the three things, good learning materials, effective student support, and efficient logistics. The two universities which participated in the study apply the dual mode education delivery. The universities have developed open and distance learning programmes to supplement the residential mode. These universities were overwhelmed and were not able to meet the high demand for flexible university education. There is need for a national open university to be established in order to address the issue of demand for university education.

2. The current selectivity into ODL programmes based on student qualifications or assessment of ability is good as it makes student numbers more manageable and enables higher pass rates, thereby contributing to the cost-effectiveness of these programs. In the interests of fairness and equity, however, the institutions may wish to consider offsetting selective admissions with fully open entry with no requirements to a qualifying or bridging course, which must be passed as a requirement for admission to the university open and distance learning programmes. This would give everyone willing to have university education but

was disadvantaged during secondary education due to extreme poverty leading to failure to attend a good formal school. This would also benefit students from traditionally disadvantaged communities, and those orphaned by HIV/AIDS among other causes.

3. The study established that there existed a difference between the attention given to those in the urban centres, who are closer to reach and those who are far to reach in terms of access to study materials and feedback on the students evaluation. This study recommends that the institutions try balancing the attention given to all students by producing study materials in advance and distributing them to the various centres. The universities should also ensure that the students receive feedback on their assignments and examinations in time.

4. The study did establish that most of the teaching staff who facilitate these programmes have not been given special training on the delivery of open and distance learning techniques. It is important to note that well-trained and competent staff are important in the delivery of quality open and distance learning. It is necessary that sufficient preparation time and funding is given to staff training in open and distance learning delivery techniques.

5. The facilitators who responded in this study also felt that the workload was too much given that they were the same lecturers facilitating the residential mode of

education among other responsibilities like research and publications. They also raised the issue of compensation with the majority feeling that it was too low compared to the workload and the time they put into provision of these services. It is, therefore, the study's recommendation that the teaching staff levels be raised to reduce individual workload. The programme administrators should also respond to the issue of low compensation to ensure staff motivation.

6. There is no specific budgetary allocation to ODL programmes according to the study findings and most of the open and distance learning programmes have been launched as means of generating income to public universities hit by declining budgetary allocations. The study recommends that ODL programmes be considered in the country's budgetary allocations to support especially the programmes' capital development.

7. Both universities which participated in the study had resource centres in all the eight provinces in the country. These resource centres constitute an important mode of transmitting information. They are meant to provide facilities for learning for individual and group tutoring and academic guidance and counseling. The open and distance students who responded in the study felt that the centres were not doing enough since they had to travel all the way to the head offices to get study materials. They also felt that the centres did not do enough in facilitating individual or group tutoring and academic guidance and counseling. It is,

therefore, important to strengthen student support services and ensure optimal utilization of the centers.

8. Technology is very dynamic and universities in Kenya cannot cope with these changes in terms of cost and relevancy yet effective application of information technology is important in ensuring quality open and distance learning. This study thus recommends mobilization of all the stakeholders by the government to establish infrastructure that would support application of technology in the provision of ODL.

9. While the University of Nairobi Open and Distance Learning Policy recommends sponsorship of ODL students through student loans and bursaries for students from poor socio economic backgrounds, this had not been achieved by the time of the study. The study recommends that those students from poor socio-economic backgrounds be given an equal opportunity to benefit from student bursaries and student loans as their counterparts in residential mode of education.

10. The study also established that there were no national policies that governed ODL in Kenya and that the institutions providing these programmes were guided by their own policies. The study recommends establishment and implementation of national policies on ODL to address among other things, programmes financing, human resource development, and quality assurance.

### **5.3.1 Recommendation for Further Research**

1. A study on ODL unit costs is also recommended to avoid overburdening either party in the cost sharing programme.
2. A similar study should be replicated in other institutions like the private universities and other tertiary institutions who did not participate in this study.

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## APPENDICES

### **Appendix 1: Interview Schedule for Senior Administrators in Distance Learning**

1. What is the present structure of your institution regarding open and distance learning?
2. What are some of the reasons for implementing open and distance programme?
3. What type of facilities do you employ and how effective are these type of facilities in communication between the instructors and the students?
4. What is the level of funding compared to the residential method of education?
5. What are the staffing levels and their adequacy in the delivery ODL?
6. What is the admission criteria to open and distance learning programmes?
7. What cost factors should be considered when planning or implementing distance learning programmes and how are those costs offset by benefits to the institution and the learner?
8. What are the main models of programme organization and delivery?
9. Are the organization's decision makers in a position to respond to new competitors in the field of open and distance learning?
10. What are the challenges that you face in open and distance learning delivery compared to traditional methods of instruction?
11. Do you have policies in place to address the challenges?
12. Please comment on the strategies put in place by your institution to address the changing issues of technology in distance learning.

## Appendix 2: Questionnaire for Lecturers in Open and Distance Learning

### Instructions

This questionnaire is for collecting data for research on the Challenges of Open and Distance Learning in Kenya's Public Universities and it is hoped that the information you give will be useful in this educational research. You are assured that all the information you give will only be used for this research purpose.

- You are requested to respond to all statements in each section.
- Put a tick in the box that best represents your response to each statement.

1. How long have you been involved in the open and distance instruction?.....

2. Have you received special training on the open and distance learning instruction? Yes  No

If your answer is yes, has the training been helpful in delivering this type of programme and in what way(s)?

.....  
 .....

3. How do you compare delivery of open and distance learning with the traditional face to face?

Excellent  Good  Average  Fair

4. Which equipment do you employ in open and distance learning instruction?

Computer  Television  Radio

Other (Please specify) .....

5. What is your opinion on the equipment used in the delivery of open and distance learning?

Excellent  Good  Average  Poor  N/A

6. What are the resource materials used in open and distance learning instruction?

Modules  Textbooks  Internet

Other (Please specify) .....

7. What is your opinion on the resource materials used in the delivery of open and distance learning?

Excellent  Good  Average  Poor

8. (a) Are programme resources and delivery consistent and appropriate across all *geographical* locations? Yes  No

If your answer is no, what are the disparities and their impact on the nature and outcome of the services provided?

.....  
.....  
.....  
.....

(b) What is your suggestion on ways to improve the disparities?

.....  
.....  
.....

9. (a) How do you rate performance of open and distance learning students compared to their counterparts in the residential programme?

Good  Average  poor

(b) Please explain your answer to question 9(a) above

.....  
.....

10. In your opinion is the programme well delivered and organized?

Yes  No

If no, what measures do you suggest should be put in place to improve the programme delivery?

.....  
.....  
.....

11. Are adequate resources being used to deliver the programme? Yes  No

12. Is programme staffing sufficient to ensure appropriate standards? Yes  No

13. Is funding sufficient to ensure smooth running of the programme? Yes  No

14. What is the duration of your contact with students in a semester?

.....

15. (a) Are the students receiving proper amount, type and quality of services?

Yes  No

(b) Please explain your answer to question 15(a) above

.....  
.....  
.....

16. Do you receive compensation in the delivery of open and distance learning?

Yes  No

17. Do you think the compensation is adequate? Yes  No

18. Do you get proper motivation to participate in open and distance learning?

Highly Motivated  Motivated  Lowly Motivated  Not Motivated

19. What type of contract do you have with the University regarding open and distance learning?

Full time  Part time  Other (Please specify) .....

20. Are you satisfied with the contract? Yes  No

21. What challenges do you face in the delivery of open and distance learning?

.....  
.....  
.....  
.....  
.....

22. Please give your suggestions on what should be done to address the challenges

.....  
.....  
.....

### Appendix 3: Questionnaire for Students

#### Instructions

This questionnaire is for collecting data for research on the Status and Challenges of Open and Distance Learning in Kenya's Public Universities and it is hoped that the information you give will be useful in this educational research. You are assured that all the information you give will only be used for this research purpose.

- You are requested to respond to all statements in each section.
- Put a tick in the box that best represents your response to each statement.

1. Province: Nairobi  Kisumu  Garissa
2. Level of study: Certificate  Diploma  Bachelors  Masters
3. Your year of study 1<sup>st</sup>  2<sup>nd</sup>  3<sup>rd</sup>  4<sup>th</sup>  5<sup>th</sup>  6<sup>th</sup>
4. Gender F  M
5. Age bracket 18-24 years  25-40 years  40-above years
6. What are some of the reasons that made you opt for distance learning as opposed to traditional method of instruction?
  - i).....
  - ii).....
  - iii).....
  - iv).....
  - v).....

6(a) Are you satisfied with open and distance learning programme delivery and organisation?

Yes  No

(b) Please give reason(s) for your answer to question 6(a) above

.....  
.....

7. Is your programme of study cost effective? Yes  No

8. What is the method(s) of instruction used?

i) Television  ii) Radio  iii) Modules

iv) Internet  v) Face to Face

9(a). How do you rate the method(s) of instruction used?

i) Very effective  Effective  Not effective

ii) Very effective  Effective  Not effective

iii) Very effective  Effective  Not effective

iv) Very effective  Effective  Not effective

v) Very effective  Effective  Not effective

(b). Please give reasons for your answer(s) to question 9(a) above

i).....

ii).....

iii).....

iv).....

v).....

10(a). What method(s) of evaluation is/are applied?

.....

(b). How do you rate the method(s) of evaluation used?

Very effective  Effective  Not effective

(c). Please give reasons for your answer to question 10(b) above

.....  
.....

11(a). Is the time of interaction with the instructors adequate? Yes  No

(b). If no, what do you suggest should be done to improve the situation?

.....  
.....

12(a). How do you rate the quality of instruction you receive?

High  Average  Low

(b). Please give reason(s) for your answer to question 12 (a) above?

.....  
.....

13(a). Do you usually get enough time to cover the syllabus? Yes  No

14. How often do you receive feedback on your assignments and examinations?

Very often  Often  Less often  Not at all

15. What are the challenges that you face in this type of education as compared to traditional on campus instruction?

- i).....
- ii).....
- iii).....
- iv).....
- v).....

16. What mechanisms do you think should be put in place to address the challenges that you have mentioned above?

- i).....
- ii).....
- iii).....
- iv).....
- v).....

**Appendix 4: Table for Determining Sample Size from a Given Population**

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size

"S" is sample size.

Krejcie and Morgan (1970).