FACTORS INFLUENCING IMPLEMENTATION OF DISTANCE EDUCATION AT THE NATIONAL MUSEUMS OF KENYA

BY

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A research project submitted in partial fulfillment of the requirement for the award of the degree of Master in Distance Education of the University of Nairobi

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DECLARATION

This research project report is my original work and has not been submitted for any degree award or to any other University

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DEDICATION

I dedicate this project to my late father Mr. Samuel Murage who to this day is still a key pillar in my life for instilling in me Godly values, honesty and hard work. I also wish to dedicate my research work to my mum, Mrs. Wanjiku Murage for her unwavering support irrespective of her health difficulties.

ABSTRACT

Museums have for a long time served as educational centers in different regions across the world. However, dynamic changes in the environment have presented lots of challenges with regard to Museums education and its relevance to its unique clientele. The purpose of this study was therefore to establish the factors that affect implementation of distance education at the National museums of Kenya. The objectives of the research work was to determine how instructional factors; institutional, technological and teachers factors and expertise factors influence the implementation of distance education at the National Museums of Kenya. This study utilized descriptive cross sectional study design in which quantitative and qualitative data was collected and integrated in the explanation of the on the whole results. The target population was 600 employees working in National Museums of Kenya education and research areas, Information Technology section, public programs and cultural heritage departments within the institutional headquarters. Stratified random sampling was applied to collect the required data. The data was collected using structured questionnaires and key informants interviews guides tested for validity and reliability. Hence findings reveal that National Museums of Kenya teachers need training in distance teaching and distance instruction fits within the institution goals and mission. The findings of this study will help decision makers and Museums educational officers to package distance educational materials in a way that is expected by end users and hence have more educational impact to the wider audience. The findings will go a long way in addressing issues that affect distance education hence making it more accessible to the marginalized groups. Distance Education is an effective strategy of reaching wider coverage of employees who are geographically scattered across diverse regions but National Museums of Kenya should also target on other interested learners. In conclusion The National Museums of Kenya policy on distance education should be developed to suit the learner's needs and desires and the content should be responsive to the diverse cultural backgrounds. Availability of professional distance education personnel, effective Internet and computers are primary incentives to successful implementation of Distance learning at the NMK. The study recommends partnership between NMK and the likeminded organizations' as well as involves stakeholders for feedback, monitoring and evaluation.

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LIST OF ABBREVIATIONS AND ACRONYMS

DE	Distance Education
EFA	Education For All
GOK	Government of Kenya
ICOM	International Council of Museums
ICT	Information Communication Technology
IMPL	Implementation
MDGs	Millennium Development Goals
NMK	National Museums of Kenya
ODeL	Open and Distance e-Learning
SPSS	Statistical Package for Social Science
TV	Television
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNISA	University of South Africa

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

Distance education provides numerous benefits such as meeting the requirements of non-conventional learners with household tasks to career and family that prevent them from taking ordinary university classes (O' Lawrence, 2007). To bridge the gap between supply, demand and other challenges educationists are undertaking a paradigm shift from normal classroom teaching mode to distance education, owing to its flexibility and convenience (Kyalo, 2013). In most developing nations, the potential of distance education is being exploited in an effort to overcome the difficulties facing tertiary education (Nyerere 2012). Distance education is defined as a mode of learning where instructor and learner are not in available at the same position or time. It is an efficiently structured learning process that uses an assortment of technologies to access students at a distance. Education delivery at a distance is planned in a way that it supports learner interaction and provides the required fulfillment of learning (Kyalo, 2013). This mode of learning has elicited incredible enthusiasm both within and outdoor conventional learning institutions (Wuensch 2008). The enthusiasm spans almost two centuries signifying dynamic learning occurrence and communication (Moore & Kearsley, 2011). The authenticity, quality, and competitive standards remain debatable (O'Lawrence, 2007).

National Museums of Kenya (NMK) is at the initial stage of digitizing its collections with the aim of enhancing the implementation of distance education. The organization is a multi-disciplinary state body established by an Act of Parliament, the Museums and Heritage Act 2006. The organizations function is to collect, preserve, study, document and present Kenya's past and present cultural and natural heritage. This is aimed at enhancing knowledge, appreciation, respect and sustainable utilization of these resources for the benefit of Kenya and the world, for now and posterity. The institution annually receives thousands of international and local scholars. As an institute that must answer to the increasing needs of the people, NMK is determined to contribute in a distinctive way to the duty of National development by disseminating and managing heritage and biodiversity information.

National Museums of Kenya's mandate together with the vibrant atmosphere in which the institution operates has presented vast challenges with regard to management of Museums and its relevance to its unique clientele. A symposium entitled 'New Roles of Museums' stated that Museums are now under great pressure to be more relevant to wider audiences. In order to keep abreast with new educational demands, NMK redefined its operations in year 2007. Through a project dubbed ''Museum in Change'' the institution came up with a new department called public programs that aims at implementing distance education as a means of making the educational resources more responsive to the changing circumstances. This meant moving towards developing Museums as a place where people from all walks of life meet and have a dialogue on various socio-economic issues.

Vision 2030, Kenya's new development plan for 2008 to 2030 envisions the nation a newly industrialized, "middle income country providing high quality life for all its citizens by the year 2030". Complete execution of e-Learning at institution of higher education levels is considered as a long-standing guiding principle in Kenya's Vision 2030 aims. Discharge of education through technology in conjunction with other strategies for teaching in Kenya's Vision 2030 is expected to attend to the premeditated areas, explicitly, access, worth, impartiality, expertise and innovation. The dream for the teaching segment for 2030 is "to have internationally competitive value education, schooling and research for sustainable development" (NESC, 2007). Owing to this, e-learning initiatives have been introduced in Kenyan public higher learning institutions in line with the government's policy requiring universities to introduce e learning as an option for instruction delivery procedure.

Technology is an integral part of distance education without which distance education implementation process will be adversely affected. It is therefore important for institutions to make decisions early enough if their institution's technological infrastructure has the capacity to effictively deliver distance learning program. New technologies including Information Communication Technology (ICT) and e-Learning have become the driving forces in most institutions including universities today. However, Balci and Soran (2009) point out that when 'ICT' and 'e-Learning' was almost ready to be acknowledged by most educators as a savior, its

limitations have also started surfacing and now the call is for 'blended learning'. Garrison and Vaughan (2008) define blended learning as "the thoughtful fusion of face-to-face and online learning experiences". Currently many institutions are opting for the blended learning delivery of courses (Stubbs, Martin, & Endlar, 2006). Research conducted in many schools in Kenya has established that most of them are not effectively adopting and using ICT to support learning, teaching and management as intended (Manduku, Kosgey, & Sang, 2012). Though many universities have adopted blended learning as a starting point due to lack of adequate e-learning skills and infrastructure, full implementation of e-Learning will offer numerous benefits to universities. According to Takalani (2008), e-Learning adds the benefit of encouraging learners to take responsibility for their learning and build self-knowledge and self-confidence. Other studies have shown that adoption and use of e-Learning in schools can promote collaborative, active and lifelong learning, increase students' motivation, offer better access to information and shared working resources, deepen understanding, help students think and communicate creatively (Khan, Hasan & Clement, 2012).

1.2 Statement of the problem

National Museums of Kenya (NMK) has for a long time served as educational centers in different regions across the country and a host for large and diverse audiences. However, the mushrooming of several universities and institutional private Museums has scaled up competition. In an effort to remain relevant to its audiences, National Museums of Kenya has undertaken tremendous transformation such as the adoption of distance learning programs. Generally, distance education programmes have contributed immensely in the achievement of Sustainable development goals and the Kenya Vision 2030 targets by making education available and universal to all (Maritim, 2009). Museums have hence explored these options having understood the new demands and the stiff competition, which the institution cannot ignore. National Museums of Kenya has also discovered that the facilities are an underutilized means for educating the public especially as community Museums begin to play related tasks. The National Museums of Kenya distance-learning program is mirrored with anecdotal (unreliable) range of opinion concerning the appropriateness and benefits. The scholarly world has postulated that the success of programs such as distance learning is premised on several factors not limited to

individual, situational, dispositional, institutional and instructional factors (Cosmas and Mbwette, 2009).

A functioning Distance Education programme at the National Museums of Kenya can immensely contribute to the delivery of vision 2030 envisioned activities under the education and training pillar owing to the institutions wealth in scientific innovations. However, National Museums of Kenya does not seem to have clear policy guidelines to deliver distance education. In addition, institution lacks financial capacity to employ skilled e- Learning personnel and the few teachers available do not seem to possess skills in distance education. Furthermore, National Museums of Kenya as an institution of learning does not have adequate infrastructure to handle online learning, which is currently at the initial stage of implementation. For distance education to bear fruits, technology and skills, mode of instruction and faculty preparedness needs to be improved (Cosmas and Mbwette, 2009; Mbukusa, 2009). Since the introduction of distance education program at the National Museums of Kenya, there seems to be no thorough study conducted to assess the various limitations that hinder successful implementation of this program from the service provider and recipient perspectives. Furthermore, with diminishing space to handle more collections in the available National Museums stores, this study is timely as a means of evaluating distance education as a pivotal opportune strategy in the running of Museums educational programs.

1.3 Purpose of the study

The purpose of the study was to determine the factors influencing implementation of distance education at the National Museums of Kenya.

1.4 Objectives of the study

The study focused on the following objectives.

1. To determine how learner characteristics influence the implementation of distance education at the National museums of Kenya.
2. To assess the influence of institutional factors on the implementation of distance education at the National Museums of Kenya.

3. To establish how technological factors influence the implementation of distance education at the National Museums of Kenya.
4. To determine the influence of teachers characteristics on the implementation of distance education at the National Museums of Kenya

1.5 Research questions

The study was guided by the following research question

1. How do learners' characteristics influence the implementation of distance education at the National museums of Kenya?
2. To what extent do institutional factors influence the implementation of distance education at the National Museums of Kenya?
3. How do technological factors influence the implementation of distance education at the National Museums of Kenya?
4. To what extent do teachers characteristics influence the implementation of distance education at the National museums of Kenya

1.6 Significance of the study

The study findings aimed at helping National Museums of Kenya policy makers and other similar gatekeepers to develop policy framework and guidelines to improve these programs so that they have a better educational impact. Research findings helped in packaging of the distance education materials in a more effective way for the targeted end user. National Museums of Kenya employees benefited by gaining an in-depth understanding of the concept of distance education and can now engage institutions of higher learning like the Nairobi University whose practice of distance education has borne fruits in order to acquire skills and be able to apply the knowledge learnt to develop their own distance education courses based on their policy guidelines. Gaps for employee's capacity to deliver instruction at a distance were identified and a mechanism of building capacity can be derived from the study findings. These study findings were availed to the management of National Museums of Kenya with the aim of developing policy guidelines that would help the institution to realize its dreams to deliver effective distance education programs. In a bid to improve efficiency in distance education delivery at the National

Museums of Kenya, some of the employees who participated in the study, and displayed potential in distance education delivery could be considered for further training in distance learning institutions like the Nairobi University.

Employees working in educational delivery settings stand an opportunity to benefit from the study since the findings would be disseminated through peer-reviewed journals. These kinds of journals have the potential to improve the employees' capacity to deliver distance education at regional Museums, improve the institutions corporate image and at the same time offer quality education to larger audiences. Some of the audiences that National Museums of Kenya endeavor to address through this approach are people who would not have been able to access Museum oriented literally articles thereby opening the Museum to a wider scope. In addition, the data generated have elicited policy debates amongst education stakeholders, service providers, and consumers of education as a product, scholars and the community at large. At the moment, the Museum is viewed as a place for the affluent community. The study findings address the key issues associated with open and distance learning education in the Kenya, which has gone a long way in improving access and quality of distance education programs in the country. The findings of the study lead to a clear path to streamline National Museums of Kenya distance educational programs to accommodate the interest of diverse groups in a mode that best suits them.

1.7 Assumptions of the study

The study was undertaken on the following assumptions:

Nairobi National Museum would give a reflection of distance learning situation in Museums within developing Nations considering that it is the flagship of all other Museums in Kenya. It was also assumed that the respondents would provide more accurate information.

1.8 Limitation of the study

The study had the following limitations:

i. The human resource used in this study lacked distance education skills to conduct the research exercise effectively.

ii. The researcher had to juggle between work and the data collection exercise that is tedious.

iii. The results were based on personal opinions that have bias in terms personal perception and exposure.

1.9 Delimitations of the study

The study was limited to the opinions and views of the employees and clients of the National Museums of Kenya. This study was also focused only on the major components, which include learner characteristics, institutional and technological and teachers/leaders factors that influence implementation of distance education at the National Museums of Kenya. The depth of the study was within variables in the learner, instructional, institutional teacher, and technological independent factors. The dependent variable was delivery or implementation of distance learning at the National Museums of Kenya. The scope incorporated only programs involved in Museums educational programs. Employees less than three months in the National Museums of Kenya work stations and Non - consenting employees were excluded from the research.

1.10 Definition of significant Terms used in the study

Distance education: Form of study where the learner and instructor are separated by space and time hence print or electronic communications media are used to deliver the instructions.

Learner characteristics: These are learners' personal details, attitudes, skills and previous experiences that influence implementation of distance education.

Institutional factors: This refers to the structures and systems including schemes, rules, norms, and routines that are established by an institution that influence implementation of distance education.

Implementation of distance education: Is the process that turns strategies and plans into actions geared towards attaining distance education objectives and goals.

Technological factors: This factor refers to a body of knowledge devoted to creating tools, processing actions and extracting of materials that influence implementation of distance education. The term technology is wide and everyone has his or her own way of understanding the meaning of technology. Technology is used to extend our abilities, and that makes people as the most important part of any technological system.

Teachers' characteristics: These are factors that relate to the teachers/facilitators/support group/attitudes, behaviours, characters and preparedness that influences students towards positive behavioral outcomes or performance in the implementation of distance education.

1.11 Organization of the Study

This study project comprises of five chapters. Chapter one highlights the background of the study, the research objectives, research questions, statement of the problem, significance of the study, its limitations, delimitations and significant terms of the study. In Chapter two literature reviews are discussed and chapter three contains the research methodology. Chapters four presents the data analysis, presentation and interpretation obtained from the surveys and discuss them to provide a better understanding. Chapter five presents the summary of the findings, discussions, conclusion and recommendations of the study.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

In this chapter, factors that influence implementation of distance education were discussed. The researcher narrowed down to five major factors that influence implementation of distance Education, which includes leaner characteristics, institutional related factors, technological, teachers /managerial characteristics and expertise/ skills characteristics factors. The role of distance education in National Museums of Kenya educational programs was examined. Lastly, a conceptual framework was used to illustrate the relationship between the factors that influence distance education and the uptake of distance education programmes in the National Museums of Kenya.

2.2 The concept of distance education

According to Council on Higher Education, (2014) distance education is an array of different means to communicate and mediate a curriculum without necessarily requiring instructors and learners to be in the same place at the same time. It is as well a mode of provision of knowledge delivery, concerned with the design of programs that presuppose the spatial and/or temporal separation of instructors and learners for the majority, and possibly the complete, of the education experience (Council on Higher Education, 2014). It is crowned on institutional certification (where education is accredited by an a certifying body authority or agency), use of a variety of media, including print, radio and television broadcasts, video and audio cassettes, computer-based learning and telecommunications, provision of two-way communication, which allows for tutor-learner interaction and possibility of face-to-face meetings for tutorials, learner-learner interaction, library study and laboratory or practice sessions (South African Institute for Distance Education (SAIDE), 2002). The universe of relation is shaped by three constructs: the structure of the instructional programmes, the interaction between learners and the teachers and the nature and degree of self-directedness of the learner (Petherbridge and Egan Warren 2005).

The aim of distance education is to focus on learning design for discharge of teaching, knowledge, hold up and evaluation with or devoid of supporting technology that endeavor to offer educational opportunities to learners who are not physically 'on site' Council on Higher Education, (2014). Apart from sequential and spatial disjointing concerns in a distance instruction situation, there is a 'transactional distance' that exists in all teaching and learning interactions and that may well be exacerbated in a distance education context. The concept of transaction connotes the interplay between environment, the individuals and the pattern of behaviors in situation. The first distance-learning program in the present-day brains was borne by Sir Isaac Pitman in the 1840s. This involved an instruction procedure of shorthand by mailing texts transcribed into shorthand on postcards and getting transcriptions from his learners' in feedback for evaluation. The aspect of learner response was an important innovation of Pitman's system. This technique was achievable by the initiation of standardized postage rates across England in 1840. This first establishment proved exceptionally lucrative, and the Phonographic correspondence society was started three years afterward to institute distance education on a more official basis. The Society cemented the way for the later configuration of Sir Isaac Pitman tertiary institutions across the country; with the first correspondence institute being fully functional in 1873 at the United States.

2.3 Components involved in implementation of distance education

According to Gunawardena & McIsaac, (2005) there are four workings of distance learning. The first is institutionally based. The term institutional refers to both the traditional educational schools and colleges and non-traditional institutions that offer distance education, examples of such being the Museums, corporations and businesses. The second and third component is the concept of partition of the instructor and learner by space and time. Often, the separation is mainly by geographical location but also time separation is key since the instruction is usually passed to learners who accesses it at different times depending on their convenience and availability as opposed to the traditional classroom set-ups. The intellectual gap or disjointing between the tutors and the learners forms the fourth component of distance education. This is occasioned by the fact that the instructors have more understanding in as far as concepts are

concerned compared to the students. The reduction of these various separation aspects is essential in a distance education process (Gunawardena and McIsaac, 2005).

Garrison (2011) defines distance education as "electronically mediated asynchronous and synchronous communication for the purpose of constructing and confirming knowledge." E-Learning can be considered a natural evolution of distance learning, which has always taken advantage of the latest tools to emerge in the context of technologies for structuring education (Sangrà, 2012). E-Learning can be classified into two broad categories, synchronous and asynchronous (Cantoni, 2004). Synchronous learning uses a learning model that initiates a classroom course, lecture or meeting using Internet technologies. In synchronous learning, the interaction is live; it requires all the participants to be available at the same time. Asynchronous learning is described as a web-based version of computer-based training (CBT), which is typically offered on a CD-ROM or across an organization's local area network. The learner can access the course at any time at his or her own pace (Takalani, 2008). According to Keiyoro & Ngunjiri, (2010), implementation of e-Learning is still at the infancy stage in most Kenyan public universities due to many challenges related to implementation.

These challenges range from technological, organizational and pedagogical challenges. Universities that are planning to implement e-learning in their institutions should be prepared to respond to the challenges that are likely to arise in the course of implementation. Kenyan universities are being compelled by the government within the framework of Kenya Vision 2030 to introduce e-learning and blended learning as an alternative delivery system to increase accessibility to higher education in Kenya (NESC, 2007). Kenya Vision 2030 is the nation's new development blueprint for 2008 to 2030 which aims at making Kenya a newly industrializing, "middle income country providing high quality life for all its citizens by the year 2030". Full implementation of e-learning at university levels is considered as a long term strategy in Kenya Vision 2030. Implementation of e-learning alongside other strategies for education in Kenya Vision 2030 is anticipated to address the strategic areas, namely, access, quality, equity, technology and innovation. The vision for the education sector for 2030 is "to have globally competitive quality education, training and research for sustainable development" (NESC, 2007).

2.4 Influence of Learners characteristics in the implementation of distance education

Adult students have bubbly attitudes towards tutors, high interior locus of control, and high effectiveness, and are essentially motivated (Gatotoh 2017; Dille & Mezack, 1991; Garland, 1993). Since the 1920s, the adult learner and the manner in which he or she learns best have been questioned and researched when adult education became a professional field of practice (Merriam, 2001). Today, several theories and models attempt to explain adult learning. One of the most well-known theories is Malcolm S. Knowles' learning theory of andragogy, the art and science of helping adults learn. Andragogy is a learning theory that is designed to address the particular needs of adults, and is based on the idea that there are significant differences in learning characteristics between children and adults. Majority of distance learners have formal jobs, place bound and are goal oriented.

Today's distance education students differ still from conventional classroom learners. They tend to be functional difficulty solvers. Their life experiences make them self-governing, autonomous, and objective and relevancy oriented. These learners therefore need to be acquainted with the underlying principle for the courses they enroll to study. They are self-motivated by career progression, external prospect such as boosting self-esteem, the need to provide better services to others, upscale community associations, escape or stimulation, and sometimes pure interest in the subject. Their demands include time and scheduling in the midst of busy schedules, financial constraints, and other 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). The assignment surroundings for online learners are different from that for face-to-face students. Online students do not have opportunities to physically meet one another or the teacher. Communication is often limited to written text and may be void of visual cues, and there are challenges keeping tabs on individual students' learning when they are studying remotely. The bodily distances that these students encounter can lead to the learner having feelings of isolation, anxiety, and bewilderment (King 2002).

(ICOM, 2006) has put forward an official definition of Museums that is astonishingly inclusive, registering "service to society" and other functions. A recent journal article includes an even looser definition: "any institution, built, or any interpreted environment that may have an educational role, whether education is part of its mission statement or not" is a Museum (Rennie and Johnson 2004). In order to keep abreast to the current demands of further education, more distance learning programs are being developed and implemented annually targeting fulfillment of Kenya's vision 2030s education pillar of making education available and universal to all (Maritim, 2009). Guided by the adult learners' characteristics, institutions need to tailor make instruction that best suit learners' needs to ensure increased enrolment for distance education and student retention. Such kind of an instruction will satisfy the growing demands of further education and career growth among adults in the formal working environment.

The main evident characteristic of distance education is flexibility. With appropriate tools, learners obtain course content without time limitations or geographic confines. Flexibility is referred to as the major benefit of distance learning. The essential inspiration of distance education is facilitators and students are in distant spaces most of time (Moore & Kearsley, 2011). According to Holmberg, the handiness, elasticity, and flexibility of distance courses are the main reasons learners opt this mode of education as a substitute to traditional classroom courses (Holmberg, 2005). Distance education is particularly essential for adult learners who choose it in order to study alongside family tasks, job, and community responsibilities (Duffy & Kirkley, 2003; Ally, 2008; Smaldino, 2008). In addition, as Laurillard argues that handiness commonly refers to the logistics of study, enabling students to study where and when is most appropriate for them, and to the preference of curriculum, which becomes learner-centred, rather than school-led" (Laurillard, 2008). Convenience is not only about studying at ideal times and in chosen spaces, but also about studying at one's own speed. It assists a few students to gain deeper understanding experiences and enables to spend less time on knowledge content which they are previously knew, so that they can focus on what they are unaware of (Brown, 2012).

For distance tutors, convenience means arranging well in advance the required course materials at the point it is most suitable for them as well. Facilitators for distance learning can bring up to

date learning tools and let students catch sight of the changes instantly (Ally, 2008). In addition, it is easier for distance educators to point out to learners the relevant knowledge based content on the Internet depending on their needs (Ally, 2008). Furthermore, with a well-structured learning administration arrangement, facilitators can assess students' requirements and existing level of proficiency and then allocate appropriate responsibilities to students to attain the preferred education results (Ally, 2008). In present instruction, a move in the direction of more student-oriented assumptions has arisen. Numerous distance-learning studies are currently focused on student-oriented assumptions aimed at meeting the demands of the shifting world (Smaldino 2008).

Garrison and Anderson states that distance learning is not as learner-oriented as what is referred to as face-to-face learning, since education is the business deal linking teachers and students, irrespective of the type of learning it could be (Anderson, 2004). However, distance teaching wires a student-oriented learning atmosphere more effortlessly. As Smaldino states, the student-oriented method to instruction suits well into distance tutoring settings. By its natural world, distance tutoring makes emphasis on the students need in becoming engaged in the knowledge development" (Smaldino 2008). In view of the fact that learners choose what time, wherever, and at what speed they will study, they at the same breath need to participate more actively in making decisions that touch on their learning procedures. Owing to this, the competence and fulfillment of instruction depends a great deal on the individual learner. However, not all learners are wired to suit this mode of study.

There are cases of learners whose knowledge of computers enhances their learning encounter to a great extent. Research proposes a relationship connecting advanced levels of computer knowledge and larger satisfaction of online instruction programs (Mitchell 2005), cited from Sahin & Shelley, 2008). Besides, lack of adequate or complete computer skills and knowledge reduces course worth and suitability (Sahin & Shelley, 2008). For lucrative online courses, students need to have endowed with certain gifting and characteristics (Valentine, 2000). They must train themselves consciously to be disciplined in terms of study habits (Moore, 2011). Moreover, learning achievements in a web-based virtual learning environment are significantly

affected by student personality characteristics (Schniederjans, 2004). Previous studies about learner attributes in distance education concluded that several characteristics affect the success of the learner in the distance education environment. Students who are young and have higher education levels are more likely to complete online courses. In addition, motivation and a positive attitude toward the instructor are also essential factors that contribute to the success of distant learners (Smaldino, 2008).

The importance of student autonomy does not mean that educators have less responsibility. There are discrepancies, however, in studies on time spent on online teaching (Brown, 2012). Some researchers indicate that it has caused course preparation time for instructors to increase (Zhou, 2004) and instructors have to design and plan courses completely before they start (Caplan & Graham, 2008). Course materials are not simply put online. They have to be arranged in a way suited to all learners. Content presentation needs to be intuitive for the various types of students who may interact with it (Smaldino, 2008). In distance education, course content might be wrapped in various formats, such as multimedia, video, and text. This gives access to learning content that utilizes all media attributes (Anderson, 2004).

Therefore, the instructor needs to take technological elements and their effect on the students into account. Some scholars suggest that creating a high quality online course requires the cooperation between subject-matter experts, media and technology specialists, and instructional designers (Smaldino, 2008; Moore, 2011). No one individual has all the skills necessary to developing and delivering a distance-learning course. Additionally, do teachers have to familiarize themselves with the hardware and LMS needed for the course so as to use them effectively in teaching, they also need to be concerned with technical problems that students will face when connecting to courseware (Smaldino, 2008). The instructor is the person that learners contact most frequently. If learners have any questions on educational content or technical issues, the instructor is usually the first person that learners seek for assistance. In addition, as education moves away from familiar classroom settings, the online environment often becomes a challenge for instructors (Smaldino, 2008).

Many skills and techniques which were important in face-to face settings are not applicable online and some teachers must to learn new teaching methods as well as unlearn certain old ones (Caplan & Graham, 2008). For instance, educators often use visual cues such as facial expressions in auditory communication with students after class to evaluate and adjust the instructional approach of a course (Gupta, 2010). In an online course, all these visual and auditory clues are eliminated and difficult to decipher. Immediate feedback – whether from students or teacher – is also lacking in asynchronous distance education. Thus, students can get pretty far off of the track over the course of their learning process (Duffy & Kirkley, 2004). In a text-based environment, teachers have to alter their behavior in response to the new affordances of the medium (Ruhleder, 2004).

2.5 The Influence of institution factors in the implementation of distance education

Realization of e-Learning in institutions of higher learning ought to be viewed as a component of educational amendment. For e-Learning to be competent and successful, an institution ought to make extra concern and mind to go into its execution. According to Cox (2010), if e-Learning is to be effectively adopted in a school, facilitators and leaders ought to be incorporated in the resolution making processes. Management and support from lead management are acknowledged as essential elements for successful execution (Birch & Burnett, 2009; Browne, 2010). Full administrative and faculty support is the key to bringing distance education into the mainstream of public higher education. Kenya Government initiative as contained in Session Paper No 1 of 2005 (Republic of Kenya, 2005) recommends the establishment and use of distance education at all levels. In an effort to respond to the new government policy, different institutions have provided distance education National Museums of Kenya included but guided by the different institutional policies. As a result, education at a distance is now common in Kenyan tertiary institutions, both public and private due to its economies of scale and its ability to deliver classes to a wide geographical and diverse population. According to Kyalo (2013), this mode of learning is a reality that is offering opportunities for students to have broader choices from where, when, how and from whom they learn thus making education accessible to all. Furthermore, Distance education has gained legality over the years due to its flexibility in relation to time, space, pace and cost effectiveness without compromising quality.

Distance Learning is multifaceted meaning that it can be conducted through postal or online modes (O'Lawrence 2007). These multiple modes of delivery are reshaping the world of schooling, revolutionizing instruction and training practices and delivery systems. The diverse modes of delivery have affected the societal organization of training and learning by expanding the delivery of instruction. In addition, they have opened opportunities to reorganize the fundamentals of higher-education surroundings, such as the roles of learners and instructors, schedule in terms of place and time of instruction, and organizational participants (O'Lawrence, 2007). Vision 2030 envisions Kenya as a country with a democratic system reflecting the aspirations and expectations of its people. Kenya aims to be a state in which equality is entrenched, irrespective of one's race, ethnicity, religion, gender or socio-economic status; a nation that not only respects but also harnesses the diversity of its peoples' values, traditions and aspirations for the benefit of all.

The Vision aims to move all Kenyans to the future as one nation. Kenya's Vision 2030 is the country's development programme covering the period 2008 to 2030. President Mwai Kibaki launched this vision on 10th June 2008. Its objective is to help transform Kenya into a "newly industrializing, middle income (income exceeding currently at US$10000) country providing a high quality of life to all its citizens by 2030 in a clean and secure environment." The Government's commitment to the provision of quality education and training to its citizens at all levels cannot be over emphasized. Vision 2030 singles out education and training as the vehicle that will drive Kenya into becoming a middle-income economy. In addition, the Constitution, 2010 has provided for free and compulsory basic education as a human right to every Kenyan child. It is because of this, that the Government took some action that has created a lot of dialogue revolving around the education sector.

The online format is rapidly gaining impetus (O'Lawrence, 2007) owing to its capacity to deliver instruction to a large group of students, the flexibility involved and the ability for students to get instant feedback from their facilitators. Kenyan Institutions of learning have made adaptations to take advantage of new computer-mediated systems and the Web to scale up distance education. There are however several difficulties to prevail over when implementing e-learning in colleges.

According to Salmon (2004), focusing instruction on the technological features of the e-learning arrangement is only the first stride to triumph; the actual challenge is principles for changes to pedagogy. Blinco (2004) stated that e-learning's success rests on the elementary necessity that tutors and learners possess sufficient practical skills to use e-learning tools efficiently. According to Tarus (2011), execution of e-learning is still at the early life stage in most Kenyan public universities due to numerous challenges associated to execution. These difficulties vary from technological, institutional and pedagogical challenges. Institutions of higher learning intending to execute distance education in their college set-ups should be ready to attend to the difficulties that emerge in the course of implementation. Kenyan colleges are being pushed by the government within the composition of Kenya Vision 2030 to commence e-learning and blended learning as a substitute delivery system to enhance accessibility to higher education in Kenya (NESC, 2007). The National Museums of Kenya is at the initial stage of implementation of its distance learning having made the first step in process of digitalization of its specimen and objects and the activity is currently ongoing.

The commission on reforms strongly feels that should the Government increase funding in the education sector, particularly in training and technology, all other pillars under vision 2030 will be achieved with ease. The government, in collaboration with development partners and other stakeholders have been implementing the Kenya Education Sector Support Programme (KESSP) with a view to addressing the main sector issues including the need to strengthen the organization and delivery of learning services. In effect, this will expand the admission, value, fairness and significance of education and training. In order to stay on tr ail towards meeting the objectives of the MDGs (Millennium Development goals) and Vision 2030, additional educational reserves in the brief, intermediate and long term should be made obligatory. Education for All (EFA); a worldwide association led by UNESCO (United Nation Educational, Scientific and Cultural Organization), intended to meet the education requirements of all children, youth and adults by 2015. UNESCO has been charged to guide the lobby group and direct the global efforts to reach learning For All proposed targets. Governments, where National Museums of Kenya belongs, development bodies, pressure groups, non-government agencies and the media are but some of the associates functioning in the direction of achieving these

aspirations. The EFA goals also throw in to the international chase of the eight Millennium Development Goals (MDGs), particularly MDG two on worldwide crucial education and MDG three on gender parity in education, by 2015. A Fast Track Initiative was set up to execute the EFA lobby group, aiming at accelerating development towards valuable worldwide primary education.

2.6 The Influence of Technology in the implementation of Distance Education

One of the most evident trends influencing distance education is the progression of Information skill or technology. The oxford Advanced Learners' Dictionary defines information technology as the study or use of electronic equipment, especially computers for storing and analyzing information. Infrastructures are getting stronger as computers increase in speed while declining in price, and speedy set-up connections keep on getting bigger. Gakuu & Kidombo, (2010) and Gunawardena (2005) observed that for e learning to gain prominence in the developing world, it should build on one more important pillar, infrastructure, along with connectivity. Third world countries like Kenya still face numerous challenges while discharging distance education, which needs sophisticated level of technical equipments and weighty asset of capital particularly at the early stages. Most of the Kenyan public colleges and other institutions of learning like National Museums of Kenya rely on government funding which has been diminishing in the recent years. According to Keiyoro & Ngunjiri (2010), scarcity is one of the key obstacles to successful execution of DE, mainly due to the fact that ICT is imperative relatively more expensive in Africa than in developed countries. In the Month of April 2018, the digitalization of the learning materials at NMK begun and the process is currently ongoing.

Computer, fax, picture mobile phone, photocopying, and other modalities are integrated and becoming accessible at affordable prices (Cetron, 2003). Further, IT functionalities not anticipated decades ago are being discovered. By 2018, computers will be able to regularly decoding languages in concurrent with the correctness and pace essential for effectual exchanges" (Cetron, 2003). New skill will change higher learning as known nowadays (Oblinger, 2001). By the year 2012, education institutions will customarily employ "computerized instruction programs and interactive television lectures and seminars, as well as

customary systems" Videoconferencing and other technologies will also help enhance distance media and offer numerous benefits of conventional instruction (Cetron, 2003). The aim of distance education is to focus on education design for discharge of instruction, knowledge hold up and evaluation with or without supporting equipment; geared towards provision of learning opportunities to learners who are not bodily on site'(Council on Higher Education, 2014). According to Gatotoh, Gakuu & Keiyoro (2017) the use of mobile phones in mLearning environment is either enabled or constrained by the learner self-efficacy. Learner self-efficacy therefore becomes a critical determinant in acceptance and subsequent adoption of information and communication (ICT) for teaching and learning.

In spite of the widespread notion that Museum teaching consists chiefly of an instructor leading a crowd of kids through the Museum, the existing certainty is much broader. In view of the fact that Museum instruction emerged as a profession in the past 50 years, with its unique instruction programs, specialized organizations and distinct roles in the Museum, the responsibilities of Museum instructors have stretched out radically. A new study of art Museum educators' availed evidence for more than 45 different kinds of tasks, ranging from the regular courses and tours to organizing village festivals, developing networks with universities and city bodies, and video-conferencing (Wetterlund and Sayre 2003). These new demands for Museums pushes the National Museums of Kenya to move speedily to respond to the growing technological demands aimed at reaching its diversified audiences.

New technologies such as Information Communication Technology (ICT) and e-learning are nowadays the driving forces in most institutions including universities today. However, Balci and Soran (2009) postulate that when 'ICT' and 'e-learning' are almost being accepted as liberators by most educationists as a liberator, its challenges have also begun to surface and now the call is for 'blended learning'. Garrison and Vaughan (2008) define blended learning as "the thoughtful combination of face-to-face and online education experiences". At present numerous institutions opt for the blended education delivery of courses (Stubbs, Martin, & Endlar, 2006). Investigation conducted in several schools in Kenya has discovered that most of them are not successfully adopting and applying ICT to hold up knowledge dissemination, instruction and

administration as anticipated (Manduku, Kosgey, & Sang, 2012). Despite the fact that various universities encompass blended learning as an entry point due to inadequate e-learning expertise and communication tools, full discharge of e-learning will provide many benefits to universities. According to Takalani (2008), e-learning provides the advantage of motivating students to obtain responsibility for their education and develop self-knowledge and self-assurance. Additional research indicate that assumption and application of e-learning in learning institutions can encourage mutual, dynamic and lifetime education, add to learners' incentive, present improved access to knowledge and collective running assets, intensify understanding, assist learners to consider and discuss their sense of the matter innovatively (Khan, Hasan & Clement, 2012).

2.7 The influence of teachers' characteristics in the implementation of Distance Education

A leader is someone who influences followers towards positive behavioral outcomes or performance (Drotter, 2003). Numerous surveys have showed that teachers are a key authority on learner actions, whether constructive or unconstructive, whether with uprightness or not (Levin, & Nolan, 2007). Distance learning faculty executors include administrators, instructional designers, technologists, and facilitators (Miller, 2001; Williams, 2003). There is consequently a skinny line between institutional factors that influence execution of distance teaching and management styles' influence on the implementation of teaching; considering that institutions leadership is accountable for the execution of education. The responsibilities of tutors and include being a "facilitator, teacher, organizer, grader, adviser, role model, counselor, trainer, supervisor, problem solver, and liaison" (Williams, 2003). Institutions that intend to implement distance education should bear in mind that this mode of learning requires specialized skills and strategies. Implementers of distance education need be accessible to students and work in teams when appropriate, plan ahead, be highly organized and communicate with learners in new ways.

If we go by the basic definition of a leader given earlier, then the answer is that the role of the educator as a head in classroom, whether conventional or online, remains the same. The instructor is still there to make learning easy and the attainment of learners' goals. Nevertheless, the education philosophies and means that tutors can apply to assist their varied group of students attain their goals must be tailored to the individual learner needs and situation (Csapo

and Hayen, 2006). They postulated that a leader can influence the performance, fulfillment, and also create incentives to a learner in diverse ways such as give rewards when students attain goals, helping to develop strategies towards goals and providing a supporting environment. An individual may carry out this by adopting one of the four leadership styles; namely directive, participative, supportive, and achievement, based on the circumstances. The situation is made up of two variables: the subordinate's/learner's characteristics, and the characteristics of the surroundings. After evaluating the circumstances, the head/instructor try to assist the devotee/learner identify goals and then realize them in the most proficient way. Leaders/teachers may even adjust their styles with an individual during the finishing point of a task, if one part of the job needs a different incentive from another. Galusha cited in Dabaj (2011), propounds that there are many barriers in teaching and learning process of distance education. He states that the main one being the unawareness of the roles as teachers and students. In addition, Galusha asserts that studies show that the hindrances to distance learning fall into such categories as price, motivators, response and teacher contact, student support and services, isolation, lack of skill and instruction. In addition, course content on the other hand constitutes another difficulty and should be modified in distance education. Therefore, to create successful and competent distance education, all hindrances must be identified and removed. But it is worth noting that these difficulties usually overlap and come together at some point.

2.7.1 Teaching Styles

Grasha (1996) based his definition of teaching styles on the power bases that instructors apply to influence students towards constructive results. These power bases include expert (expert power), formal authority (legitimate power), personal model (referent power), facilitator (supportive and participative), and delegator (laissez faire). Baker (1990) used the Path Goal Leadership Model to make out effectual teaching styles used by teachers in classroom settings. They defined leader/teacher styles as the interface behavior adopted by leaders/teachers to inspire and persuade learners and settled that a teacher is a leader. Their argument was based on the fact that an ideal instructor, recognizes and engages students' desire to learn, is interested in identifying learners' educational goals in relation to the specific course, and is apprehensive about the students' path to educational achievement. By realizing what learners bring to the

study environment and by tying their attitudes and abilities to the particular course, the teacher arouses, engages and satisfies students' needs. Their idea of defining teaching style neatly summarized many of the other definitions of teaching styles. They suggested that instructors could guide their students towards learning and learner goals by applying one of the four teaching styles: influencer, supporter, achiever, and theorist.

Influencers entrust to clear objectives, continually persuade students viewpoint regarding themselves, enthusiastically caught up with the student, look for and exploit each occasion to assist student attain goals. There exists common learning. They educate the learners how to learn. Supporters are open minded, pay attention impartially, responsive to student point of view, conscious of student morals, continually seek knowledge on the learner, search for to know implications of proceedings and circumstances, and by this means make the most of outcome. They assist learners by making them paying attention in the topic offered. Achievers (House's achievement oriented style): seek to make the most out of outcome by assessing the ultimate goal, solutions, and results, continually experimenting and trying to find creative solutions to get the best results. They help their learners to be independent thinkers. Theorists use quantitative analysis to design better learning designs. They explore and present teaching theories to understand and execute best learning environment and thus attain the best achievement. Today students desire to connect and engage and also develop a mechanism through which they can connect with their surroundings' regularly such as computer-mediated communications. Technology supported study gives room for interaction, learn more from and with people in their community, connect with experts and expertise and avail more opportunities for dialogue and communication, Dunleavy & Milton (2009). Many others agree that tutors should adjust their styles and means to learner needs and characteristics. Delahoussaye, (2002) found that the styles most frequently applied by effective facilitators for the adult students were the influencer and achievement styles, with the theorist style coming second. The instructors' often changed their styles to fit the student style.

This transactional distance is determined by the interrelated function of three sets of variables in learning and teaching processes, Council on Higher Education, (2014). These variables are

instructional dialogue, program structure and student autonomy. The Instructional dialogue denotes the extent of interaction between the student and educator either on a large-scale lecture-based programme or between a distance student and an educator. The speed of dialogue between distance students and their educators is important which the information technology system has greatly enhanced making ICT an integral part distance learning. The essential concern is whether opportunities for such dialogue are built into a learning programme and whether they are mediated in the best possible way in the given circumstances.

Program Structure refers to the extent to which a programme can accommodate or be responsive to each individual's needs. It hence suggests the need for multi-disciplinary teams to design learning experiences in such a way that diverse needs are catered for and opportunities for student-student and student-educator dialogue are maximized. Student autonomy refers to the extent to which in the teaching/learning relationship, the student rather than the educator determines the goals, the learning experiences, and the evaluation processes of the learning programme. It raises questions about the extent to which a program delivered helps students reach a point where they no longer need another person to guide and mediate their learning. At this stage, students can cope with a high degree of spatial and temporal distance between themselves, their educators and their peers. In this respect, there is need to explore whether there is significant difference in modes of provision at various National Museums of Kenya models of distance education.

2.8 Theoretical Framework

There are at least four theories on distance education, which include independent study theory, equivalency theory, and theory of industrialization of teaching and transactional distance theory. This study will be guided by Moore's (1990) theory of "transactional distance". He explains that distance education is determined by the amount of dialogue that occurs between the learner and the instructor, and the amount of structure that exists in the design of the course. According to Moore, greater transactional distance occurs when an educational program has more structure and less student-teacher dialogue, as might be found in some traditional distance education courses. In support of this theory, Saba and Shearer 1994 states that as learner control and

dialogue increase, transactional distance decreases. It is not location that determines the effect of instruction but the amount of transaction between learner and instructor. They hence suggest that the use of integrated telecommunication systems may permit a greater variety of transactions to occur, thus improving dialogue to minimize transactional distance. For purposes of this study, transactional theory is the most suitable. This theory fits into the study objectives, therefore the most appropriate theoretical frameworks.

2.9 Conceptual framework

A conceptual framework refers to a structure that clearly illustrates the linkages between variables that are important for a study. It hence elaborates a researcher views about the concepts deemed vital in a study. In this study, the researcher views that the implementation of distance education/ learning is influenced by instructional, institutional and technological and teachers factors as indicated in the research objectives and question. This is shown in Figure 1

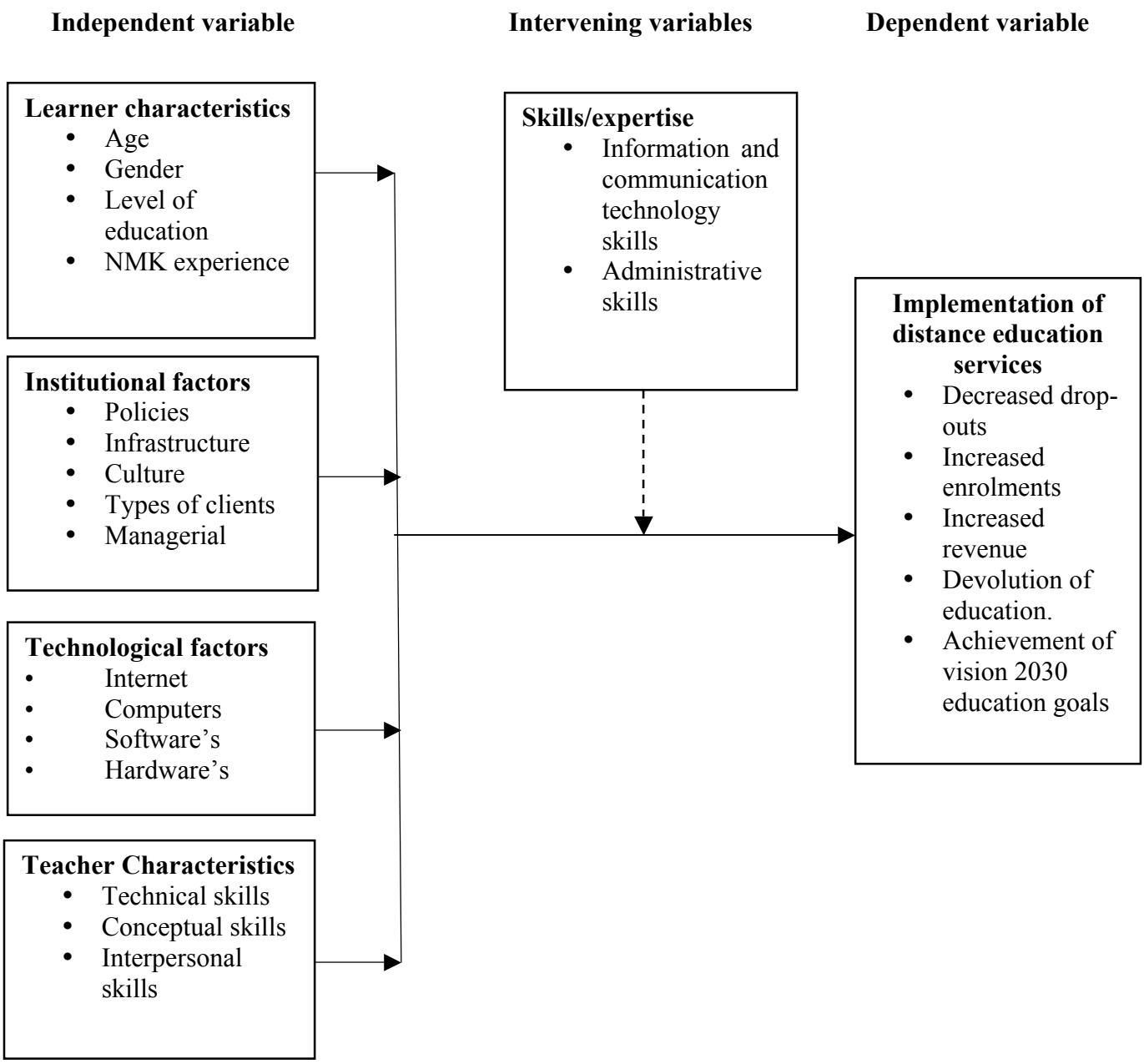

Figure 1: Conceptual Framework

2.9 Knowledge Gaps

The framework indicates the relationship between independent variables (instructional, institutional teachers characteristics and technological), intermediate and study outcome (dependent variable).

Museums are fundamentally and necessarily educational institutions, and an appropriate educational role in Museums includes social action. This is the true significance of the progressive tradition in education, long a part of museum practice and history. There are many means for museums to express this social, progressive component of education. Museums can support growth and development for all individuals; democracy and human rights for all in myriad ways. It is the responsibility of the Museum Community to acknowledge this task and exploit its opportunities. Therefore, the study variable will resonate on following gaps:

Table 2.1: Knowledge Gaps

	Author	Title	Finding	Knowledge gap
1.	Tarus (2011)	Challenges of Implementing E-Learning in Kenya: A Case of Kenyan Public Universities	Implementation of e-learning is still at the infancy stage in most Kenyan public universities due to many challenges	The study will review the current status with regard to distance education implementation in National Museums of Kenya with specific focus on the influence of technology.
2.	Nyerere (2012)	The status of and the various challenges that hinder realization of the full potential of open distance and e learning (ODEL) in Kenya.	Efforts of the ODEL providers in Kenya were not guided by national policies, posing a challenge in resource mobilization and program quality issues.	This study will investigate the efficiency in production of study materials at NMK, online program funding, and the efforts of Distance learning program at NMK in adhering to the Kenya's national policies with the aim of identifying gaps in delivery of NMK online learning for more educational impact on the learner. The main focus will be to establish the role of leadership in distance education

	Author	Title	Finding	Knowledge gap
3.	Moore's (1990)	Concept of transactional distance	Encompasses the distance, which, he says exists in all educational relationships. This distance is determined by the amount of dialog which occurs between the learner and the instructor, and the amount of structure which exists in the design of the Course.	This study will establish the gaps in technological, conceptual and interpersonal skills of both learners and facilitators are necessary for effective implementation of distance learning at NMK. The study will examine the role of interpersonal skills in promotion of distance learning at NMK
4.	Kyalo (2013)	Influence of Connectivity on Readiness to adopt e Learning in Public Secondary Schools in Kitui County, Kenya.	The study reveals the educational Challenges in Kenya Towards Fulfillment of the Vision 2030	The study will examine the extent to which NMK as an institution utilizes computer mediated technology to bridge the gap in order communicate to learners who are geographically separated from the main resource centre based in Nairobi
5.	Nolan, (2007)	Distance Education Teacher as a Leader: Learning from the Path Goal Leadership Theory	Many studies have indicated that of provision teachers are a major influence on student behavior, whether positive or Negative, whether with integrity or not Nolan (2007).	This study will examine the gaps in the influence of leadership styles in the implementation of distance education at the National Museums of Kenya

2.10 Summary of literature review

In brief, this section outlined reviews the dynamic role of learner characteristics, institutional, leadership styles and technology in propelling distance education across the globe. Distance education programs have evolved considerably from the inception of the first correspondence courses in 1840 to the many types of present distance delivery modalities. The characteristics of effective distance education programs to be used in this research study emerged from the comprehensive review of literature. Numerous studies have determined the attributes of effective distance education through the attributes of its components including: learners, instructors, program design, technologies, and organizational support. Literature sources dealing with predictors of successful distance students revealed have focused on student and few on the instructors, which is the jeopardy of this study. There are few studies on the perceptions of staff implementing projects and those few have been limited to satisfaction, attitudes, and perceived learning and interaction rather than the skill, competency and cooperation of the staff.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

In this section, various ways, procedures and techniques that were applied to collect the relevant data are discussed. It covers the study design, target population, limitations, delimitations, sample size and sampling procedures, Research instruments, data analysis procedure, validity of the research instruments and reliability of the research instruments.

3.2 Study design

This utilized descriptive cross sectional study design. Quantitative and qualitative data was collected and then integrated in the interpretation of the overall results. This allows for comprehensive analysis of the description of the association between the dependent and independent variables. This method is appropriate for this study because it removes any assumptions and replaces them with factual data on the variables being studied.

3.3 Target population

The target population was 600 employees working in education related areas of research, Information Technology, public programs and cultural heritage departments.

3.4 Sample size

According to Mugenda and Mugenda (2003), a sample size is a representative of a target population. In this study, 234 is the sample size derived from Krejcie and Morgan (1970) table and will be distributed proportionately.

Table 3.1: Sample size of Target population

Directorate	Population	Sample
Human Resource & Administration	100	39
Museums Sites &monuments	200	78
Research	300	117
Total	**600**	**234**

Source: Author

3.5 Sample size sampling procedures

Sample size was derived from Krejcie and Morgan (1970) table. The formula used to determine the sample size is as follows:

$$n = Z^2pq/d^2$$

Where, n is the desired sample size

Z is the standard normal deviate, usually set at 1.96 that corresponds to the 95% confidence level; p is the proportion in the target population estimated to have a particular characteristic. q = 1.0-p and d is the degree of accuracy desired, set at the 0.05 level

p = 0.5, z =1.96, (The target population is approximately 600)

$1.96)^2(0.5)\ (0.5)/\ (0.05^2) = 383$

Correction for population less than 10 000 was done as follows;

nf = n/(1+n/N) = 383/ (1+383/ 600) =234, a five % was added for attritions resulting to 245.

A stratified random sampling was applied to collect data. A method of sampling that involves the division of a population into smaller groups known as strata. In stratified random sampling, the strata are formed based on members' shared attributes or characteristics. A random sample from each stratum is taken in a number proportional to the stratum's size when compared to the population. These subsets of the strata are then pooled to form a random sample (ttp://www.investopedia.com). The stratum was division, departments and sections within National Museums. In each, subsets: researchers, programs, educators, curators and technical experts will be interviewed.

3.6 Research Instruments

The data was collected using structured questionnaires and Key Informants Interviews (KII) guides. Key informant interviews were conducted, to enable the researcher collect in-depth and sufficient data that could be relied upon. Information from the pre-test informed the final questionnaire.

3.7 Validity of the research instruments

Care in development of the instrument was undertaken so that the wordings do not have any ambiguities. To ensure content validity, the supervisor reviewed the research tools.

3.8 Reliability of the research instruments

Split half reliability method was used to test consistency. This is a method that assesses the degree to which different observers or respondents keep consistent estimates of the same phenomena. For this study, this was ensured through selection and training of five research assistants, engaging them in the pre-test and supervising them during the data collection process. The tool was pre-tested at Uhuru gardens Museums so as to ensure the reliability and suitability of the questionnaire. The study used split half method, which treats the two halves of a measure as alternative forms. Split half method provides an easy answer to the problem that the parallel-forms method faces such as the difficulty in developing alternate forms. This entails the process of administering a test to a group of individuals. Splitting the test in half and correlating scores on one half of the test with scores on the other half of the test. The correlation between these two split halves is used in estimating the reliability of the test.

3.9 Data analysis procedure

Data was entered, coded and cleaned in the excel software (Microsoft Office 2010) and analyzed using Statistical Package Social Science (SPSS) version 20.0. Logistic regression was used to describe data and to explain the relationship between the dependent variable and independent variables. The results were presented descriptively and inferentially by chi-square test with an alpha value of 0.05 and logistic regression being used.

3.10 Ethical issues

The study observed appropriate ethical issues. According to Mugenda (2003) ethics is that branch of philosophy, which deals with ones conduct and serves as a guide to one's behavior. In this study, information collected was treated with confidentiality to avoid discomfort of respondent. Respondent's identity was not disclosed and individual code numbers were used to identify them. The participants were informed of their right to decline to participate and to terminate the interview at any point during the interview session. The study purpose was explained and participants assured of privacy. Confidentiality was maintained, throughout the survey and subsequent presentations. A copy of the consent form was given to the participants for records. Additional clearance and cooperation was obtained from the management of the National Museum of Kenya. Participation was voluntary. No payment was given to the respondents for participating in this study and there was no anticipated participation cost on the part of the participants.

3.11 Operationalization of the Variables

The dependent variable and the 4 independent variables were operationalized using the following scales (Table 3.2).

Table 3.2: Operationalization of Variable

OBJECTIVES	VARIABLE	INDICATORS	MEASUREMENTS	SCALE
To determine how learner characteristics factors influence the implementation of distance education at the National museums of Kenya	Learners characteristics	Age, gender, academic level, category of staff, terms of employment	Interval scales and direct measures(e.g. male or female)	Nominal Ordinal
To assess the influence of institutional factors on the implementation of distance education at the National Museums of Kenya.	Institutional factors	Institution support, Educational goals and missions Incentives Legal concerns	5 point likert scale	ordinal
To establish how technological factors influence the implementation of distance education at the National Museums of Kenya.	Technological factors	Equipment cost Maintenance cost Limited technological infrastructure	5 point likert scale	Ordinal
To determine the influence of leadership styles on the implementation of distance education at the National Museums of Kenya	Leadership styles	Interpersonal skills needed. Technical skills Conceptual skill	5 point likert scale	Ordinal

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

Questionnaires and interview guide instruments were used to gather data; both of which were designed in line with the objectives of the study. The findings are derived from research on 245 respondents against the targeted 257. Only 4.5% did not fill the questionnaire, making a response rate of 95.5%.

4.2 Respondent general characteristics

This section highlights the respondents' general characteristics such as age, gender, and academic level, category of staff and years of service at National Museums of Kenya.

4.2.1 Age distribution of the respondents

The results of age distribution of the respondents are shown in Table 4.1.

Table 4.1: Distribution of respondents views according to age

Characteristic (Age)	Frequency	Percentage
Below 30 years	3	1.3
31-40 years	76	32.5
41-50 years	94	40.2
51-60 years	49	20.9
Above 61 years	12	5.1
Total	**234**	**100**

Majority 40.2%, ranged between 41-50 years followed by age 31-40 years 32.5%. Age category between 51-60 years reported 20.9%, while above 61 years were 5.1% and then below 30 years were 1.3%.

4.2.2 Gender of the Respondents

The results of the distribution of respondents by gender are as illustrated in Table 4.2.

Table 4.2: Gender of respondents

Gender	Frequency	Percentage
Male	59	25.2
Female	175	74.8
Total	**234**	**100**

Female were 74.8 and male were 25.2%.

4.2.3 Academic level of the Respondents

The academic level of the employees of NMK as indicated in Table 4.3.

Table 4.3 Academic levels of respondents

Education level	Frequency	Percentage
Primary and below	10	4.3
Secondary	114	48.7
Tertiary and above	110	47
Total	234	100

The study findings on revealed that 48.7% respondents had secondary education, followed by tertiary 47% and a few 4.3% had primary and below education.

4.2.4 Category of Staff

The results of the distribution of the respondents by job category are shown in Table 4.4.

Table 4.4: Job Category of Staff

Job Category	Frequency	Percentage
Researcher	26	11.1
Curators	66	28.2
Teachers	106	45.3
Administrative staff	30	12.8
Support Services	6	2.6
Total	**234**	**100**

The results revealed that 11.1% were researchers, 28.2% were Curators, 45.3% were teachers, and 12.8% were administration staff, while 2.6% were support members.

4.2.5 Years of Service at NMK

Years of service at NMK of the respondents are illustrated in Table 4.5.

Table 4.5: Years of Service at NMK

Years of Service at NMK	Frequency	Percentage
Below 2 yrs	10	4.3
3-5yrs	104	44.4
6-10yrs	79	33.8
11-15yrs	37	15.8
Above 16yrs	4	1.7
Total	**234**	**100**

The study revealed that 3-5 years of service were the majority 44.4%, followed by 6-10 years reporting 33.8%, then 11-15 years 15.8%.

4.3 Institutional Factors and Influence on Implementation of Distance Education

This section presents the finding on institutional factors and their influence in the implementation of distance education at National Museums of Kenya (NMK). The result in Table 4.6 shows the distribution of the respondents' views.

Table 4.6: Institutional Factors and Influence on Implementation of DE at NMK

	Strongly Agree		**Agree**		**Undecided**		**Strongly disagree**		**Disagree**	
	F	%	F	%	F	%	F	%	F	%
NMK policy on distance education policy is sufficient	0	0	103	44.0	53	22.6	78	33.3	0	0
NMK Distance Education is tailor made to meet Learners Needs and Desires	15	6.4	112	47.9	94	40.2	13	5.6	0	0
Distance Education fits within NMK institution's educational goals and missions	30	12.8	112	47.9	80	34.2	12	5.1	0	0
NMK Management Support and Development of Distance Education Courses	22	9.4	112	47.9	92	39.3	8	3.4	0	0
Legal concerns (e.g., copyright laws, etc.) as obstacles for distance education at NMK	24	10.3	132	56.4	72	30.8	5	2.1	1	0.4
NMK Distance Education serves clients from Different Cultural Backgrounds	35	15	146	62.4	52	22.2	1	0.4	0	0
Managers skills influence in implementation of DE at NMK	24	10.3	161	68.8	47	20.1	2	0.9	0	0

The findings revealed that none of the respondents strongly agreed with the statement that NMK policy is sufficient to drive distance learning representing while 44.0% agreed 33.3%, disagreed while 22.6% were undecided and none strongly disagreed.

The findings on the study if NMK's distance education meets learners' needs and desires revealed that 6.4% strongly agreed with the statement while 47.9% respondents' agreed. 40.2% respondents were undecided while 5.6% respondents disagreed with the statement. According to the respondents' results on the statement on Distance education fitting within NMK institution's educational goals and missions, 12.8% respondents strongly agreed while 47.9% respondents agreed with statement. 34.2% respondents were undecided while 5.1% disagreed. Findings on NMK management capacity to support development of Distance Education courses shows 9.4% respondents strongly agreed while 47.9% agreed with the statement. 39.3% were undecided while 3.4% respondents disagreed. Findings on response touching on legal concerns such as copy right issues and its relationship to distance education being obstacles in the implementation of distance education reveals that 10.3% respondents strongly agreed while 56.4% agreed. 30.8% were undecided. 2.1% respondents disagreed with the statement while 4% strongly disagreed.

Respondents' views on the statement that NMK Distance education serving clients from different cultural backgrounds showed that 15.0 % respondents strongly agreed while 62.4% agreed, 4%) respondent disagreed with the statement. Respondents argued that Managers' administration skills are of influence in the implementation of distance education at NMK, with 10.3% respondents strongly agreed with the statement, while 68.8% respondents agreed. 20.1% reported as undecided, while 9% respondent disagreed with the statement.

The study examined whether NMK policy provide guidelines to effectively implement distance education. The information as to whether NMK policy on distance education provides guidelines to effectively implement distance education is availed in Table 4.7.

Table 4.7: Rate of Response on NMK policy providing guidelines on DE

Statement	Ratings	Frequency	Percentage
Does NMK policy on distance education provide guidelines to effectively implement distance education?	Yes`	85	36.3
	No	149	63.7
Total		**234**	**100**

The response on the question asking whether NMK policy on distance education provide guidelines to effectively implement distance education, respondents presenting 36.3% said yes, while 63.7% said No

4.4 Technological Infrastructures and Distance Education

This section reveals the findings on technology skills and their influence in distance education at NMK. The findings are tabulated in Table 4.8.

Table 4.8: Technological Infrastructures and Distance education

	Strongly Agree		Agree		Undecided		Strongly disagree		Disagree	
	F	%	F	%	F	%	F	%	F	%
Equipment's as obstacles in the implementation of DE at NMK	75	32.1	108	46.2	51	21.8	0	0	0	0
Information technology skills and distance education at NMK	43	18.4	152	65.0	39	16.7	0	0	0	0
Availability of adequate computers as primary incentives to DE at NMK	56	23.9	152	65.0	25	10.7	1	0.4	0	0
Software's are integral in implementation of distance education at NMK	70	29.9	140	59.8	21	8.7	1	0.4	2	0.9
E-mail is an effective mode of delivery for distance education	70	29.9	140	59.8	23	9.8	1	0.4	0	0
Multimedia is an effective mode of delivery for distance education	124	53.0	97	41.5	12	5.2	1	0.4	0	0

4.4.1 NMK and its preparedness to cope with the vast demands in DE

The information given in this section reveals findings on the capacity of NMK institution to cope with the vast changing demands in technology as a means of delivering quality education to its clients. The findings are indicated in Table 4.9.

Table 4.9: Response rate on NMK and its preparedness to cope with changing technology

Statement	Ratings	Frequency	Percentage
Do you think NMK is prepared to cope with the vast changing demands in distance education	Yes	83	35.5
	No	151	64.5
Total		**234**	**100**

Out of the 234 respondents on the question asking whether NMK is prepared to cope with the vast changing demands in distance education, 35.5% said yes, while 64.5% said No.

4.5 Teachers characteristics and their Influence in the Implementation of DE at NMK

This section will show the respondents' views on teachers' characteristics and the role they play in the implementation of distance education. This is indicated in Table 4.10.

Table 4.10: Teachers characteristics and Distance education

	Strongly Agree		Agree		Undecided		Strongly disagree		Disagree	
	F	%	F	%	F	%	F	%	F	%
Tutors technical skills are central to distance education	23	9.8	163	69.7	47	20.1	1	0.4	0	0
Teachers conceptual skills influence of distance education delivery	21	9.0	144	61.5	68	29.1	1	0.4	0	0
Interpersonal communication plays a significant role in learner-teacher relationships	12	5.1	169	72.2	52	22.1	1	0.4	0	0
NMK's ability to develop a curriculum in distance education serves as a pillar in the implementation of distance education	16	6.8	159	67.9	57	24.4	1	0.4	1	0.4
NMK teachers' understanding of Legal concerns (e.g., copyright laws, etc.) help in the implementation of distance education at NMK	59	25.2	141	61.5	30	12.8	1	0.4	0	0
Multimedia is an effective mode of delivery for distance education	124	53.0	97	41.5	11	4.8	1	0.4	1	0.4

Respondent's views to the statement that tutors technical skills are central to distance education 9.8% strongly agreed, while 69.7% agreed with the assertion. 20.1% were undecided, while 0.4% strongly disagreed. The respondents' views on the statement that teacher' conceptual skills influence distance education delivery, 9.0% strongly agreed, while 61.5% agreed. 29.1% were undecided, while 0.4% disagreed with the statement. Respondents' views on the statement that interpersonal communication plays a significant role in learner-teacher relationships, 5.1% strongly agreed, while 72.2% agreed with the statement. 22.2% were undecided. Respondents' views on NMK's ability to develop a curriculum for distance education serving as a pillar in the implementation of distance education, 6.8% strongly agreed, while 67.9% agreed. 24.4% were undecided, while 0.4% disagreed with the statement. The views of the respondents regarding the statement that NMK teachers understanding of legal concerns (e.g. copyright laws etc) help in the Implementation of distance education, 25.2% strongly agreed while 61.5% agreed with the statement. 12.8% were undecided and 0.4% strongly disagreed with the statement. Respondents' views on multimedia as an effective mode of delivery for distance education, 53.0% strongly agreed while 41.5% agreed with the statement. 4.8% were undecided while 0.4% strongly disagreed and 0.4% disagreed.

4.6 Teachers' characteristics influence on distance learning at NMK

This section highlights the interview findings on teachers' characteristics as shown in Table 4.11. Response on question as to whether teachers' characteristics influence the implementation of distance learning at NMK, 124(53.0%) reported yes, while 110(47.0%) reported NO.

Table 4.11: Response rate on teachers characteristics influence in DE

Statement	Rating	Frequency	Percentage
In your view, do teachers' characteristics influence the implementation of distance learning at NMK	Yes	124	53.0
	No	110	47.0
Total		**234**	**100**

4.7 Factors on skills /expertise in the Implementation of DE at NMK

This section gives information on the role of skills/expertise in the Implementation of Distance Education. The result in Table 4.12 shows distribution of the respondents.

Table 4.12: Skills in the Implementation of DE at NMK

	Strongly Agree		**Agree**		**Undecided**		**Strongly disagree**		**Disagree**	
	F	%	F	%	F	%	F	%	F	%
Skills on Radio and Television content delivery are central to the delivery of DE	21	9.0	150	64.1	59	25.2	4	1.7	0	0
ICT skills influence implementation of DE	23	9.8	147	62.8	63	26.9	1	0.4	0	0
Tutors technical skills are central to DE	17	7.3	141	60.3	73	31.2	3	1.3	0	0
Understanding the concept of distance DE the implementation of DL	28	12.0	133	56.8	71	30.3	1	0.4	1	0.4
High speed and reliable internet is vital to DE implementation	21	9.0	138	59.0	72	30.8	3	1.3	0	0
DE programs need to be evaluated annually	31	13.2	126	53.8	73	31.2	3	1.3	1	0.4
DE programs need to be evaluated Bi-annually	18	7.7	153	65.4	61	26.1	2	0.9	0	0.0
Number of tutorials is key in monitoring DE at NMK	55	23.5	143	61.1	35	15.0	1	0.4	0	0.0
Learners telephone call rate is a good indicator for	27	11.5	169	72.2	31	13.2	6	2.6	0	0.0

monitoring DE at NMK										
DE policies and technological expertise/ skills are important aspects in the implementation of DE at NMK and in Kenya	128	54.7	88	37.6	16	6.8	2	0.9	0	0.0

On statement that skills on Radio and Television content delivery are central to the delivery of distance education, 9.0% respondents strongly agreed, while 64.1% agreed. 25.2% were undecided while 1.7% disagreed. Views on the statement that Information and communication skills influence implementation of distance learning, 9.8% strongly agreed, while 62.8% agreed, 26.9% were undecided while 0.4% disagreed. Respondents view on the statement that Tutors technical skills are central to distance education, 7.3% strongly agreed, while 60.3% agreed. 31.2% were undecided while 1.3% disagreed with the statement. Respondents' views on the statement that understanding the concept of distance education influences the implementation of distance learning, the respondents representing 12.0% strongly agreed, while 56.8% agreed, 30.3% were undecided, while 9% disagreed with the statement. Response on the statement that High speed and reliable Internet coupled with technological expertise is vital to distance education implementation, 9.0% strongly agreed, while 59.0% agreed. 30.8% were undecided, while 1.3% disagreed with the statement. Respondents' views on the Statement that Distance education programs need to be evaluated annually, 13.2% strongly agreed, while 53.8% agreed 31.2% of the respondents were undecided, while 1.3% disagreed with the statement. 0.4% respondent strongly disagreed Respondents views on the statement that Distance education programs need to be evaluated Bi-annually, 7.7% strongly agreed, while 65.4% agreed. 26.1% were undecided, while 9% disagreed with the statement. Response on the statement that number of tutorials is key in monitoring distance education at NMK, 23.5% strongly agreed, while 61.1% agreed, 15.0% were undecided while 0.4% disagreed with the statement**.** Respondents' views on the statement that Learners telephone call rate is a good indicator for monitoring distance education at NMK, 11.5% strongly agreed, while 72.2% agreed, 13.2% were undecided

while 2.6% disagreed. Respondents' views on the statement that Distance educational policies and technological expertise/ skills are important aspects in the implementation of Distance education at NMK and in Kenya, 54.7% strongly agreed, while 37.6% agreed. 6.8% were undecided, while 0.9% disagreed with the statement.

4.8 Feedback, Monitoring and Evaluation Factors of DE at NMK

This section gives information on the best method of obtaining feedback, monitor and evaluate distance education programs at the National Museums of Kenya. The results are revealed in Table 4.13.

Table 4.13: Rate of response on completion of assignment in evaluation of DE at NMK

Feedback, Monitoring And Evaluation Factors			
Statement	**Rating**	**Frequency**	**Percentage**
Rate of completion of assignments helps evaluate distance education at NMK	Strongly Agree	55	23.5
	Agree	161	68.8
	Undecided	15	6.4
	Disagree	2	0.9
	Strongly disagree	1	0. 4
Total		**234**	**100**

4.8.1 Rating on how completion of assignments helped evaluate DE at NMK

Respondents views on the statement that rate of completion of assignments helped evaluate distance education at NMK, 23.5% strongly agreed, while 68.8% agreed. 6.4% were undecided, 0.9% disagreed and 0.4% strongly disagreed with the statement

4.8.2 Marks performance as an effective method of monitoring distance education at NMK

Respondents' views on the statement that Marks performances are effective methods of monitoring distance education at NMK are indicated in Table 4.14.

Table 4.14: Response rate on Marks Performance as an Effective method of Monitoring DE at NMK

Statement	Rating	Frequency	Percentage
Marks performance is effective method of monitoring distance education at NMK	Strongly Agree	25	10.7
	Agree	177	75.6
	Undecided	29	12.4
Total		**234**	**100**

Respondents gave their views on marks performance as 10.7%) strongly agreed, while 75.6% agreed with the statement, 12.4% were undecided, while 1.3% disagreed.

4.8.3 Response on the statement that students' feedback helps to improve distance education at NMK

Respondent's views on student's feedback as a method that can improve distance education at the National Museums of Kenya are indicated in Table 4.15

Table 4.15: Response Rate on Student Feedback as method that can improve DE at NMK

Statement	Rating	Frequency	Percentage
Student feedback helps to improve distance education at NMK	Strongly Agree	37	15.8
	Agree	152	65.0
	Undecided	43	18.4
	Disagree	2	.9
Total		**234**	**100**

4.8.4 Implementation of DE helping to boost revenue at NMK

This section deals with the implementation of DE as illustrated in Table 4.16.

Table 4.16: Implementation of DE has helped to boost revenue at NMK

Statement	Rating	Frequency	Percentage
Implementation of distance education at NMK has helped in revenue generation	Strongly Agree	53	22.6
	Agree	130	55.6
	Undecided	48	20.5
	Disagree	3	1.3
Total		**234**	**100**

Study on implementation of Distance education helping to boost revenue at NMK revealed that 22.6% strongly agreed, while 55.6% agreed. 20.5% reported undecided, while 1.3% disagreed with the statement.

4.8.5 Feedback on whether Enrolment in DE at NMK has improved

Respondents view on the Statement that enrolment in the distance education at NMK has improved is demonstrated in Table 4.17.

Table 4.17: Response on whether enrolment in DE at NMK has improved

Statement	Rating	Frequency	Percentage
Enrolment in the distance education at NMK has improved	Strongly Agree	67	28.6
	Agree	125	53.4
	Undecided	39	16.7
	Disagree	3	1.3
Total		**234**	**100**

Findings indicated that 28.6% respondents strongly agreed, while 53.4% agreed with the statement, 16.7% of the respondents reported undecided while1.3% of the respondents disagreed with the statement

4.8.6 Dropout Rate is minimal since the start of distance education at NMK

Respondents views on the statement that dropout rate is minimal since the start of distance education at NMK is indicated in Table 4.18.

Table 4.18: Dropout Rate Minimal since the Start of DE at NMK

Statement	Rating	Frequency	Percentage
Dropout rate is minimal since the start of distance education at NMK	Strongly Agree	78	33.3
	Agree	109	46.6
	Undecided	41	17.5
	Disagree	6	2.6
Total		**234**	**100**

Research findings indicate that 33.3% strongly agreed, while 46.6% agreed, 17.5% reported undecided, while 2.6% disagreed with the statement.

4.8.7 Distance education at NMK is an effective method of devolving education

Responses on the statement that Distance education at NMK is an effective method of devolving education are shown in Table 4.19.

Table 4.19: Response Rate on DE being an Effective method of Devolving Education

Statement	Rating	Frequency	Percentage
Distance education at NMK is an effective method of devolving education	Strongly Agree	73	31.2
	Agree	143	61.1
	Undecided	18	7.7
Total		**234**	**100**

Research findings indicate that 31.2% strongly agreed, while 61.1% agreed while 7.7% reported undecided.

4.8.8 DE at NMK helps the Kenyan government in achieving vision 2030

Results on gathered from the respondents' on the statement that Distance education at NMK helps the Kenyan government in achieving vision 2030 are indicate in Table 4.20.

Table 4.20: Response rate on NMK DE helping in the achievement of vision 2030 goals

Statement	Rating	Frequency	Percentage
Distance education at NMK helps the Kenyan government in achieving vision 2030	Strongly Agree	98	41.9
	Agree	119	50.9
	Undecided	17	7.3
Total		**234**	**100**

Findings on the on the study of distance education at NMK helping in the achievement of vision 2030 goals shows that 41.9% strongly agreed, 50.9% agreed while7.3% reported undecided.

4.8.9: NMK Feedback, Monitoring and Evaluation methods of DE adequacy

Research findings on whether the current NMK Feedback, Monitoring and Evaluation methods adequate are demonstrated in Table 4.21.

Table 4.21: Response Rate on current feedback, Monitoring & Evaluations Adequacy at NMK

Statement	Rating	Frequency	Percentage
In your view, are the current NMK feedback, monitoring and evaluation methods adequate	Yes	152	65.0
	No	82	35.0
Total		**234**	**100**

Research on the findings that the current feedback, monitoring and evaluation of distance education at NMK is adequate at NMK revealed 65% indicating yes while 35% indicated No.

4.8.10 Correlation of institutional factors with Implementation of DE

The following institutional factors are significant in the implementation of distance education at NMK, Support for distance education by NMK management, the NMK Distance education serving diverse groups and administrative skills. The results above show that there is a positive correlation of 0.50 and 0.41 between NMK management support for DE (Distance Education) and the implementation of distance education, NMK DE serving diverse groups and the implementation of DE respectively. In addition, there is a negative correlation of 0.41 between administration skills and the implementation of DE. Therefore the more support the DE program receives from the management the better the implementation and more diverse groups will be served. However, higher administrative skills do not directly indicate that DE programs will be successful in the organization. All the other factors showed no significant correlation hence do

not directly influence the implementation of DE at NMK. The findings are illustrated in Table 4.22.

Table 4.22: Correlation of Institutional Factors with Implementation of DE

Correlation of institutional factors with Implementation of DE (n =234)							
	DE policy meets learners needs and desires	DE fits NMK goals and mission	Management supports DE courses.	Legal concerns are obstacles	NMK DE serves diversity	NMK administration skills affect DE	DE policy is sufficient
DE policy meets learners needs and desires	1						
DE fits NMK goals and missions	.443**						
Management supports DE courses.	.354**	.377**					
Legal concerns are obstacles	.293**	.385**	.336**				
NMK DE serves diversity	.193**	.137*	.336**	.314**			
NMK administration skills affect DE	.139*	.272**	.258**	.186**	.143*		
DE policy is sufficient	.556**	.335**	.232**	.147*	.119	.162*	
Implementation of DE	.247**	.081	**.050**	.052	**.041**	**-.041**	.284**

***** Correlation is significant at the 0.05 level (2-tailed).*

4.8.11 Interpretation of Correlation of Technology Factors with Implementation of DE

Results reveal that technology factors are significant in the implementation of distance education at NMK. The above results revealed that there was a significant positive correlation between Information technology, multimedia as an effective delivery mode with the implementation of

distance education in NMK at 013 and .008 respectively. In addition, the results revealed that there was a significant negative correlation between adequate computers and software's to the implementation of distance education at -.032 and -.001 respectively. This therefore means that the increase in information technology and multimedia use at NMK has positive influence to the implementation of distance education. However, addition of computers and installation of other software do not directly indicate that DE programs will be successful in the organization. All the other factors showed no significant correlation hence do not directly influence the implementation of Distance Education at NMK as illustrated in Table 4.23.

Table 4.23: Correlation of Technology Factors with Implementation of DE at NMK

Correlations of Technology characteristics with implementation of distance education (n=234)							
	Equipment's are obstacles	Information technology are important	Adequate computers are primary incentives	Software's are integral	E-mail is an effective delivery mode	Multimedia as an effective delivery mode	Implementation of DE
Equipment's are obstacles							
Information technology are important	.523**						
Adequate computers are primary incentives	.369**	.349**					
Software's are integral	.176**	.285**	.312**				
E-mail is an effective delivery mode	.245**	.278**	.319**	.351**			
Multimedia as an effective delivery mode	-.118	.013	.075	.315**	.390**		
Implementation of DE	.079	.091	-.032	-.001	.146*	.008	

*Person correlation is significant at the 0.05 level (2-tailed).

4.8.12 Interpretation of correlation results of teachers characteristics with implementation of DE

The results in the above teachers' characteristics factors reveal that there was a significant correlation between tutors' technical skills, teachers' conceptual skills, interpersonal communication, and the curriculum of distance education with the implementation of distance education. The study showed a significant positive correlation between curriculum and the implementation of distance education at .006. In addition there was a significant negative correlation between tutors technical skills, teachers conceptual skills and the interpersonal communication at -.047, -.039, -.037-.006 respectively. This therefore means that the more versed NMK teachers are with the curriculum the more the successful the implementation of distance education. However, more tutors technical skills, teachers' conceptual skills, and interpersonal communications do not directly indicate that Distance education programs will be successful in the National Museums of Kenya. All the other factors showed no significant correlation hence do not directly influence with the implementation of distance education as shown in table 4.24.

Table 4.24: Correlation of Teachers Characteristics with Implementation of DE at NMK

Correlations of Teachers characteristics with implementation of distance education (n=234)

		Tutors technical skills are central	Teachers conceptual skills	Interpersonal communication	Curriculum in DE	Legal concerns	Implementation of DE
Tutors technical skills are central	Pearson						
Teachers conceptual skills	Pearson	.244**					
Interpersonal communication	Pearson	.209**	.215**				
curriculum in DE	Pearson	.119	.305**	.241**			
Legal concerns	Pearson	-.047	-.039	.147*	.312**		
implementation of DE	Pearson	-.145*	-.118	-.037	.006	.103	

*. Correlation is significant at the 0.05 level (2-tailed)

4.8.13: Skills correlation with implementation of DE at NMK

This section indicates results on skills correlation with implementation of distance education as illustrated in Table 4.25

Table 4.25: Skills correlation with Implementation of DE at NMK

	Skills on Radio and TV	ICT	Technical skills	DE concept	Speedy and reliable internet	Annual EVAL	Bi-annual EVAL	Tutorial	Call rate	Policies and TECH
Radio & TV Skills	1									
ICT	.257**									
Technical skills	.369**	.248**								
DE concept	.149*	.385**	.148*							
Speedy internet	.200**	.228**	.497**	.239**						
Annual EVAL	.120	.329**	.228**	.510**	.320**					
Bi-annual EVAL	.058	.107	.301**	.098	.470**	.444**				
Tutorials	.106	.071	.222**	.280**	.287**	.535**	.361**			
Call rate	-.026	.050	.153*	-.015	.141*	.380**	.430**	.338**		
Policies and TECH	-.104	.037	-.036	.007	.034	.255**	.210**	.295**	.302**	
IMPL on of DE	-.119	-.036	-.069	.060	-.079	.163*	.065	.086	.103	.128

*. Correlation is significant at the 0.05 level (2-tailed)

CHAPTER FIVE
SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter highlights a summary of the study findings of the research that led to the conclusion and the recommendations that is divided into their respective sections.

5.2 Summary of findings

What was gathered from the field of the study was used as the basis of summary of findings, with the objectives of the study being the guide to the summary of conclusions and recommendations of the study.

5.2.1 Learners Characteristics and the implementation of distance education at NMK

The study revealed that majority of staff respondents who also learn on the job as distance education facilitators fell within the age bracket 41-50 years followed by age bracket 31-40 years presented. The findings also revealed that Female Gender made the majority of staff respondents presented followed by Male Gender. There were there three academic levels that made the staff of the National Museums of Kenya according the findings, which were the secondary level being the highest followed by the tertiary and above.

However, the findings also revealed that a small percentage belonged to the primary and below level. With regards to the Category of staff at the National Museums of Kenya (NMK), research findings revealed that the majority of the respondents were teachers followed by Curators, the administration staff, researchers and the support staff. Findings on the Years of service at NMK revealed that 3-5 Years of staff made the majority of the respondents, followed by 6-10 years of service. 11-15 years, below 2 years were 10 and above 16 years were the minority.

5.2.2 Institutional factors and the implementation of distance education at NMK

The result findings on the institutional factors/ feedback and their influence on implementation of distance revealed that the National Museums of Kenya (NMK) policy on distance education required to be more responsive to the learners needs with some of the staff respondents

indicating that NMK did not have a policy to guide distance education. The Facilitators technological skills and conceptual skills were also seen to be central to learning. The study findings also revealed that National Museums of Kenya should to allocate more funds to buy technological equipment for the learning to be effective and reach wider audiences. The Respondents agreed with the assertion that Distance education fits within NMK institution's educational goals and missions presented at 47.9%.

Research findings also revealed that NMK teachers are not trained as distance education teachers thus making it difficult for them to competently deliver education at a distance. Findings from respondents also indicated that NMK's ability to develop a curriculum in distance education would serve as a pillar in the implementation of distance education, with 159 respondents' presented at 67.9% agreeing with the assertion. The respondents' views also revealed that student feedback helps to improve Distance Education at NMK with respondents' presented at 65% agreeing with the assertion. Other respondents believed that marks performance is an effective method of Monitoring Distance education with 75.6% agreeing with the assertion.

5.2.3 Technology Factors and the implementation of distance education at NMK

With regard to Technological factors and expertise and their influence in the implementation of Distance education at the National Museums of Kenya, respondents views revealed that equipment's are obstacles in the implementation of distance education at NMK, adequate computers and lack of skills in technology hinder the implementation of distance education. Research findings also revealed that lack of funds to install Information technological infrastructure stood in the way of implementation of Distance education at NMK. The respondents also indicated that a proper way of feedback of feedback, which is all-inclusive, would help to improve service delivery at NMK.

5.2.4 Teachers characteristics and the implementation of distance education at NMK

With regard to result findings touching on teachers' characteristics and their influence in the implementation of distance education, the respondents' views revealed that Interpersonal communication plays a significant role in learner-teacher relationships. Result of the findings

indicated that NMK teachers should be trained in distance education technology to be effective teachers.

5.2.5 Skills and the implementation of distance education at NMK

Research findings on expertise/skills influence in the implementation of Distance education at NMK, respondents reported that distance educational policies and technological expertise/ skills are important aspects in the implementation of Distance education at NMK and in Kenya with 54.7% strongly agreed.

5.2.6 Feedback, monitoring and evaluation

Research findings on the NMK adequacy concerning the current distance education Feedback, Monitoring and Evaluation methods 65% Yes, while 35.0% reported No.

5.3 Discussion on findings

According to (UNESCO 2002) study materials and resources are essential components in all distance education systems. A learner requires reading materials to prepare for assessments and other supplementary reading on the Course. The Result findings of the Study on the Factors influencing the implementation of Distance education at the National Museums of Kenya reveal that the institution lacks the capacity to handle distance Education effectively due to lack of materials for study. (Talbot 2010) argues that before an institution begins a Distance Education program, it should first consider availability of reading materials such as CD- ROMS, periodicals, electronic resources and other resources accessible in the Library. Availability of these resources before commencement of a Distance Education program would help to resolve some of major challenges that learners experience in the course of their study. Respondents of this study indicated that the National Museums of Kenya technological infrastructure is incapable to cope with the vast changing technological trends due to the cost involved and lack of technical expertise. Khan (2001) argues that the last few decades have witnessed rapid expansion of higher learning's in Kenya, which can attributed to the increased demand for higher education, partly because of the positive benefits of education. The National Museums of Kenya is one of the latest institutions to begin Distance education but as discovered in this study,

numerous challenges have emerged due to lack of funds and expertise to run distance education programs effectively.

UNESCO (2002) argues that this increased demand has seen ODeL fast becoming acceptable and indispensable part of the mainstream educational platforms in both developed and developing countries, with particular emphasis on the later. As much as distance education programs hold promises at the National Museums of Kenya, a number of challenges need to be addressed before it can be fully implemented at the NMK. The challenges as revealed in the study findings were technological constraints. Respondents' views in this study revealed that ICT infrastructures outside of major cities remain inadequate and could not therefore support learning in geographically scattered areas. The study also revealed that it is critical for Distance Education Managers at the NMK to engage various stakeholders in the process of monitoring and evaluation. The study showed that the method used to evaluate distance education is inadequate with majority of the respondents suggesting use of more inclusive process to obtain reliable feedback and in the end ensure efficiency in service delivery. A study carried out by Mwangi (2002) on factors influencing the choice of study method, 153 respondents representing 55% reported that modern technology provide easy accessibility to information and therefore teachers should be prepared to embrace technology.

The reason for any institution to implement distance education including National Museums of Kenya is the flexibility approach. According to Moore theory of Transactional Distance, distance Education is a system, which the learner is autonomous and separated from the teacher by space and time so that communication is Non- human medium (Evans 2008). According to the majority of respondents in this study, Distance Education fits within NMK's educational goal and missions with 112 agreeing with the assertion rated at 47.9%. Most of the Museum learners are adult women as revealed in the study with family responsibilities and commitments and therefore flexibility in Distance Education is an important aspect that makes it more competitive than traditional classroom.

5.4 Conclusion

Learners' characteristics and implementation of distance education: Learners characteristics are an important aspect in distance education. The learners' prior school experience and family responsibilities and commitments play critical role on the students' retention of new knowledge. Adult learners who form the huge part of distance students are autonomous in decision making and also financiers of their education in most cases. According to this study, learners with computer knowledge and access to mobile phones have an advantage over the computer illiterate learners. They are more confident and possess higher self-esteem which serves as a reservoir for knowledge built up. Most NMK learners are community members drawn mainly from the village and some international tourists as well as primary and secondary school students; majority of whom possess basic education. This characteristic of the learners jeopardize learning at the NMK which is sometimes regarded to as for the elite only.

Technology and implementation of distance education: Distance education cannot function effectively without computer technology and other ICT enabled tools. Absence of ICT tools reveals that learners are isolated and lonely. This in the end becomes the main reason for students drop out. Availability of information technology such as internet, email, and mobile phones closes the gap amongst distance learners thus causing students to interact with other learners and facilitators. According to the study outcomes, NMK does not have sufficient technology to cope with the vast technology changes of the 21st century due to the cost.

Teachers' characteristics and implementation of Distance education: Teachers play a key role in distance education. They offer guidance on the courses, school requirements, counseling and encouragement to the adult learner on need basis. Most adult learners enroll for courses to acquire a status and to leave behind a legacy. This study shows that most of the students who enroll for distance education are women who fell out of class due to pregnancies at an early age or could not afford school fees due family commitment. It is therefore important for teachers to understand these diverse needs of the distance learner. The study revealed that NMK lacked competent teachers to handle distance education

Institutions and implementation of distance education: Institutions with advanced technology and are better placed in running distance education. The students enrolment in distance learning courses is dependent on the institutions ability to offer courses online, reach wider masses through technology and be able accessible on ICT communication. According to the study National Museums of Kenya need to upgrade their systems to communicate widely

5.5 Recommendations

1. The study therefore recommends employment of young people as young people are more prepared to embrace technology. Since the Female gender was the highest, I would recommend to the management and the government to come up with an initiative to increase the Male gender in the workforce. The secondary level made the highest number of staff at followed by tertiary level. I recommend training of the staff to ensure efficiency in service delivery. Considering that majority of respondents were teachers, I would suggest that NMK teachers be trained to handle distance Education. Again a Museum is learning institute and learning forms part of the Museum core activities. Most of the respondents indicated they had worked at the NMK for 3-5 years meaning that the institution is gaining recognition and attracting new staff, previous employees leave the institution. I would recommend a review in work procedures to retain workers
2. The NMK should allocate more funds to distance education. The findings revealed that technological equipment's are obstacles to the implementation of distance education.
3. The NMK should develop a clear policy guideline to guide distance education. The study findings reveal that NMK distance Education policy does not sufficiently provide guidelines to effectively implement distance education.
4. The NMK should employ qualified teachers to handle distance education. The findings reveal that teachers' technical skills are central to the implementation of distance education at NMK.
5. The NMK should partner with likeminded institutions to benchmark. The findings from the study indicated that NMK should partner with likeminded institutions or benchmark with other learning institutions. The NMK teachers should enroll for distance education training.

The results on feedback reveal that NMK teachers are trained as traditional classroom teachers and not distance teachers.

5.6 Suggestions for further study

Considering this Study on the factors influencing the implementation of Distance education was conducted at the National Museums of Kenya as a case study, the researcher suggests further study to be carried out in other tertiary institutions that offer distance education to gain an in depth understanding on the nature and scope of distance education and its impact on society.

REFERENCES

Ally, M., & Samaka, M. (2013). Open education resources and mobile technology to narrow the learning divide. *The international review of research in open and distributed learning*, *14*(2), 14-27.

Anderson, T. (Ed.). (2008). *The theory and practice of online learning*. Athabasca University Press.

Attwell, G., & Hughes, J. (2010). Pedagogic approaches to using technology for learning: Literature review.

Balci, M., & Soran, H. (2009). Students' opinions on blended learning. *Turkish Online Journal of Distance Education*, *10*(1).

Birch, D., & Burnett, B. (2009). Bringing academics on board: Encouraging institution-wide diffusion of e-learning environments. *Australasian Journal of Educational Technology*, *25*(1).

Blinco, K., Mason, J., McLean, N., & Wilson, S. (2004). Trends and issues in e-learning infrastructure development. *Altilab04, Redwood City, California, USA*.

Brown, S., & Knight, P. (2012). *Assessing learners in higher education*. Routledge.

Cantoni, V., Cellario, M., & Porta, M. (2004). Perspectives and challenges in e-learning: towards natural interaction paradigms. *Journal of Visual Languages & Computing*, *15*(5), 333-345.

Caplan, D., & Graham, R. (2004). The development of online courses. *Theory and practice of online learning*, *175*.

Cosmas, B. F., & Mbwette, T. S. (2009). Open and distance learning in developing countries: The past, the present and the future. *Dares salaam: Open University of Tanzania*.

Cox, B. E., McIntosh, K. L., Terenzini, P. T., Reason, R. D., & Quaye, B. R. L. (2010). Pedagogical signals of faculty approachability: Factors shaping faculty–student interaction outside the classroom. *Research in Higher Education*, *51*(8), 767-788.

Csapo, N., & Hayen, R. (2006). The role of learning styles in the teaching/learning process. *Issues in information systems*, *7*(1), 129-133.

Dabaj, F. (2009). The Role of Gender and Age on Students' Perceptions towards Online Education Case Study: Sakarya University, Vocational High School. *Online Submission*, *8*(2).

Daniel, J. (2012). Making sense of MOOCs: Musings in a maze of myth, paradox and possibility. *Journal of interactive Media in education*, *2012*(3).

De Jong, N., Verstegen, D. M. L., Tan, F. E. S., & O'connor, S. J. (2013). A comparison of classroom and online asynchronous problem-based learning for students undertaking statistics training as part of a Public Health Masters degree. *Advances in Health Sciences Education*, *18*(2), 245-264.

Delahoussaye, M. (2002). The Perfect Learner: An Expert Debate on Learning Styles. *Training*, *39*(5), 28-36.

Dewey, J. (2004). *Democracy and education*. Courier Corporation.

Diaz, D. P. (2002). Online drop rates revisited. *The technology source*, *3*, 35-51.

Dille, B., & Mezack, M. (1991). Identifying predictors of high risk among community college telecourse students. *American journal of distance education*, *5*(1), 24-35.

Dortch, K. D. (2003). How to get learners to learn. In *Distance Education and Training Council: Report on the DETC 77th Annual Conference* (pp. 13-15).

Drotter, S. (2003). The leadership pipeline: the right leader in the right job. In *Management Forum Series. October* (Vol. 22).

Duffy, T. M., & Kirkley, J. R. (Eds.). (2003). *Learner-centered theory and practice in distance education: Cases from higher education*. Routledge.

Dunleavy, J., & Milton, P. (2009). What did you do in school today? Exploring the concept of student engagement and its implications for teaching and learning in Canada. *Canadian Education Association (CEA)*, 1-22.

Fedynich, L., Bradley, K. S., & Bradley, J. (2015). Graduate Students' Perceptions of Online Learning. *Research in Higher Education Journal*, *27*.

Gakuu, C. M., & Kidombo, H. J. (2010). Pedagogical integration of ICT in selected Kenyan secondary schools: application of bennett's hierarchy. *Continuing and Distance Education*, *1*(1), 73-94.

Gallagher, P. A., & McCormick, K. (1999). Student satisfaction with two-way interactive distance learning for delivery of early childhood special education coursework. *Journal of Special Education Technology*, *14*(1), 32-47.

Garland, M. R. (1993). Student perceptions of the situational, institutional, dispositional and epistemological barriers to persistence. *Distance education*, *14*(2), 181-198.

Garrison, D. R. (2011). *E-learning in the 21st century: A framework for research and practice*. Routledge.

Garrison, D. R., & Vaughan, N. D. (2013). Institutional change and leadership associated with blended learning innovation: Two case studies. *The internet and higher education*, *18*, 24-28.

Gatotoh A.M, Gakuu C,M., Keiyoro, P, N, (2018) Learner self-efficacy and mobile learning adoption among community health trainees, Kenya. International Journal of Science Arts and Commerce, Vol. 3 No. 2, February-2018

Gatotoh A.M, Keiyoro, P, N, Gakuu C.M., (2017) Learner Characteristics: Antecedents for mLearning Adoption among Community Health Trainees, Kenya. International Journal of Scientific Research and Innovative Technology ISSN: 2313-3759 Vol. 4 No. 8; August 2017

Gatotoh A.M, Gakuu C,M., Keiyoro, P, N, (2017) Learner Attitude and mLearning Adoption among Community Health Care Trainees, Kenya. International Journal of Current Research, Vol. 9, Issue,11, pp.60834-60838, November, 2017

Gunawardana, K. D. (2005). An Empirical Study of potential challenges and Benefits of Implementing E-learning in Sri Lanka.

Gupta, R. A., & Chow, M. Y. (2010). Networked control system: Overview and research trends. *IEEE transactions on industrial electronics*, *57*(7), 2527-2535.

Hoelscher, D. M., Feldman, H. A., Johnson, C. C., Lytle, L. A., Osganian, S. K., Parcel, G. S., ... & Nader, P. R. (2004). School-based health education programs can be maintained over time: results from the CATCH Institutionalization study. *Preventive Medicine*, *38*(5), 594-606.

Holmberg, B. (2005). *Theory and practice of distance education*. Routledge.

JG, M., Kosgey, A. K., & Sang, H. (2012). Adoption and Use of ICT in Enhancing Management of Public Secondary Schools: A Survey of Kesses Zone Secondary Schools in Wareng District of Uasin Gishu County, Kenya.

Keiyoro, P. N., & Ngunjiri, J. W. (2010) Influence of the School's Leadership on Integration of Information and Communication Technology in Teaching and Learning Process in Secondary Schools in Kirinyaga County; Kenya.

Khan, M. S. H., Hasan, M., & Clement, C. K. (2014). Barriers to the introduction of ICT into education in developing countries: The example of Bangladesh. *International Journal of instruction*, *5*(2).

King, K. P. (2002). Educational technology professional development as transformative learning opportunities. *Computers & Education*, *39*(3), 283-297.

King, K. P. (2002). Identifying success in online teacher education and professional development. *The Internet and Higher Education*, *5*(3), 231-246.

Laurillard, D. (2008). Open teaching: The key to sustainable and effective open education. *Opening up education: The collective advancement of education through open technology, open content, and open knowledge*, 319-336.

Lin, A. C., & Gregor, S. D. (2006). Designing Websites for Learning and Enjoyment: A study of museum experiences. *The International Review of Research in Open and Distributed Learning*, *7*(3).

Maritim, E. K. (2009). The distance learning mode of training teachers in Kenya: challenges, prospects, and suggested policy framework. *Open Learning*, *24*(3), 241-254.

Mbukusa, N. R. (2009). *Barriers to remote rural students access of distance education support services offered by the Centre for External Studies at the University of Namibia* (Doctoral dissertation).

Merriam, S. B. (2001). Andragogy and self□directed learning: Pillars of adult learning theory. *New directions for adult and continuing education*, *2001*(89), 3-14.

Mitchell, D. (Ed.). (2005). *contextualizing inclusive education: Evaluating old and new international paradigms*. Routledge.

Mooney, M., & Nolan, L. (2006). A critique of Freire's perspective on critical social theory in nursing education. *Nurse Education Today*, *26*(3), 240-244.

Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same?. *The Internet and Higher Education*, *14*(2), 129-135.

Moore, M. G. Kearsley.(2005). *Distance education: A systems view. Belmont, CA: Thomson/Wadsworth*.

Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning*. Cengage Learning.

Mugenda, O. M., & Mugenda, A. G. (2003). Quantitative and qualitative approaches: Research methods.

Mulwa, A. S., & Kyalo, D. N. (2013). The influence of principals', teachers'and students'attitude on readiness to adopt e-Learning in secondary schools in Kitui District, Kenya. *European Scientific Journal, ESJ*, *9*(5).

Nyerere, J. A., Gravenir, F. Q., & Mse, G. S. (2012). Delivery of open, distance, and e-learning in Kenya. *The International Review of Research in Open and Distributed Learning*, *13*(3), 185-205.

Obringer, L. A. (2001). How e-learning works. *Retrieved September*, *13*, 2008.

O'Lawrence, H. (2007). A case study report of a comprehensive benchmarking review of the status of vocational education students in California: Building a new relationship between community colleges and California State University System. *Journal of Career and Technical Education*, *23*(1).

Perdue, K. J., & Valentine, T. (2000). Deterrents to participation in web□based continuing professional education. *American Journal of Distance Education*, *14*(1), 7-26.

Russell, L. (2005). The Impact of the Implementation of Neo-liberal Policies in Tertiary Education in Mexico. In *International Relations* (pp. 255-287). Emerald Group Publishing Limited.

Saba, F., & Shearer, R. L. (1994). Verifying key theoretical concepts in a dynamic model of distance education. *American Journal of Distance Education*, *8*(1), 36-59.

Salmon, G. (2004). *E-moderating: The key to teaching and learning online*. Psychology Press.

Sangrà, A., Vlachopoulos, D., & Cabrera, N. (2012). Building an inclusive definition of e-learning: An approach to the conceptual framework. *The International Review of Research in Open and Distributed Learning*, *13*(2), 145-159.

Schniederjans, M. J., & Kim, E. B. (2005). Relationship of student undergraduate achievement and personality characteristics in a total web□based environment: An empirical study. *Decision Sciences Journal of Innovative Education*, *3*(2), 205-221.

Smaldino, S. E., Lowther, D. L., Russell, J. D., & Mims, C. (2008). Instructional technology and media for learning.

Stacey, E., & Gerbic, P. (2008). Success factors for blended learning. *Hello! Where are you in the landscape of educational technology? Proceedings ascilite Melbourne 2008*, 964-968.

Stubbs, M., Martin, I., & Endlar, L. (2006). The structuration of blended learning: putting holistic design principles into practice. *British journal of educational technology*, *37*(2), 163-175.

Takalani, T. (2008). *Barriers to e-learning amongst postgraduate black students in higher education in South Africa* (Doctoral dissertation, Stellenbosch: Stellenbosch University).

Tarus, J. (2011). *Adoption of e-learning to support teaching and learning in Moi University* (Doctoral dissertation, MPhil Thesis).

Tarus, J. K., Gichoya, D., & Muumbo, A. (2015). Challenges of implementing e-learning in Kenya: A case of Kenyan public universities. *The International Review of Research in Open and Distributed Learning*, *16*(1).

Tarus, J. K., Gichoya, D., & Muumbo, A. (2015). Challenges of implementing e-learning in Kenya: A case of Kenyan public universities. *The International Review of Research in Open and Distributed Learning*, *16*(1).

Van Huy, V., & Chae, B. (2004). Who should be blamed for information system failure? Integrating systems thinking into IS education. *AMCIS 2004 Proceedings*, 374.

Wetterlund, K., & Sayre, S. (2004). 2003 art museum education programs survey. *at www. museum-ed. org/(accessed May 27, 2007)*.

Williams, P. E. (2003). Roles and competencies for distance education programs in higher education institutions. *The American Journal of Distance Education*, *17*(1), 45-57.

Wuensch, K. L., Aziz, S., Ozan, E., Kishore, M., & Tabrizi, M. H. N. (2009). Technology and pedagogy: The association between students' perceptions of the quality of online courses and the technologies employed. *Journal of Online Learning and Teaching*, *5*(2), 253.

Zhou, D., Bousquet, O., Lal, T. N., Weston, J., & Schölkopf, B. (2004). Learning with local and global consistency. In *Advances in neural information processing systems* (pp. 321-328).

APPENDICES

Appendix 1: Letter of Introduction

Jane Wangechi Murage
University of Nairobi
P.O Box 30197, Nairobi
Kenya.

Dear Respondent,

REF: RESEARCH PROJECT ON FACTORS INFLUENCING IMPLEMENTATION OF DISTANCE EDUCATION: CASE STUDY OF NATIONAL MUSEUMS OF KENYA

I am a student pursuing master degree in Distance education at the University of Nairobi carrying out research on factors influencing Distance Education at the National Museums of Kenya. This Research forms part of the university requirement for my program.

I kindly request you to fill in the questionnaire as honestly as possible to enable me to successfully meet this academic requirement. The information given is purely for academic research and will be treated with utmost confidentiality.

Your assistance is highly appreciated

Yours Faithfully

Appendix 2: Questionnaire for learners' characteristics

Introduction

I am Master student at the University of Nairobi (UoN) undertaking research on factors influencing implementation of distance education at the National Museums of Kenya (NMK). I kindly request your contribution by answering subsequent questions, geared towards achievement of research goal and objectives. The study findings will assist the institution's leadership to understand the key factors that should drive distance education at the institution and at the same time have great impact to both the learner and the institution. The information will be confidential and synonymous.

1. Indicate your Age in years
   a) Below 30 years ☐
   b) 31-40 years ☐
   c) 41-50 years ☐
   d) 51-60 years ☐
   e) 61 and above ☐
   f) Refused ☐

2. Indicate your Gender
   a) Male ☐
   b) Female ☐

3. Current academic level
   a) Primary and below ☐
   b) Secondary ☐
   c) Tertiary and above ☐

4. What category of staff do you belong?
    a) Research ☐
    b) Curators ☐
    c) Teachers ☐
    d) Administration staff ☐
    e) Support services ☐
    f) Others ☐

5. Years of services at the NMK? (Tick one)
    a) Below 2 years ☐
    b) 3-5 years ☐
    c) 6-10 years ☐
    d) 11-15 years ☐
    e) 16 and above ☐
    f) Others ☐

Appendix 3: Questionnaire on Institutional, technology skills/ expertise factors

Read to respondent: "Now I would like you to rate the following statements in respect to distance education in NMK in a scale of 1-5 where: 1= Strongly Agree, 2: Agree, 3: Undecided, 4= Disagree and 5= strongly

		Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**
1.	NMK policy on distance education policy is sufficient					
2.	The distance education policy is tailored made for learners needs and desires					
3.	Distance education fits within NMK institution's educational goals and missions					
4.	NMK management supports in the development of distance education courses.					
5.	Legal concerns (e.g., copyright laws, etc.) are obstacles for distance education at NMK					
6.	NMK Distance education serve clients from different cultural backgrounds					
7.	Equipment's are obstacles for implementation of distance education at NMK					
8.	Information technology is important in implementation of distance education at NMK					
9.	Availability of computers are primary incentives to distance education at NMK					
10.	Software's are integral in implementation of distance education at NMK					
11.	E-mail is an effective mode of delivery for distance					

	education					
12.	Multimedia is an effective mode of delivery for distance education					
13.	Radio and Television programs is an effective mode of delivery for distance education					
14.	Printing and parcel learning materials are important for NMK distance learning					
15.	Face to Face is an appropriate feedback mechanism use in NMK education program					
16.	Web-based learning materials are suitable for NMK distance learning					
17.	Tutors technical skills are central to distance education					
18.	Course content influences learners interest to train through distance Learning					
19.	High speed and reliable internet is vital to distance education					
20.	Information and communication skills influence distance learning					
21.	Managers administration skills influence the implementation of distance education at NMK					
22.	Distance education programs need to be evaluated annually					
23.	Distance education programs need to be evaluated Bi-annually					
24.	Number of tutorials is key in monitoring distance education					

	at NMK?					
25.	Learners telephone call rate is a good indicators for monitoring distance education at NMK					
26.	Distance educational policies and technological expertise/ skills are important aspects in the implementation of Distance education at NMK and in Kenya					

27. Do you think NMK is well prepared in terms of technological expertise and infrastructure in order to cope with the vast changing demands in distance education? Kindly explain your answer

28. In your own view, what can NMK do to improve distance education programs?

Appendix 4: Questionnaire on Feedback, Monitoring & Evaluation

Read to respondent: "Now I would like you to rate the following statements in respect to distance education in NMK in a scale of 1-5 where: 1= Strongly Agree, 2: Agree, 3: Undecided, 4= Disagree and 5= strongly disagree						
1.	Rate of complementation of assignments helps evaluate distance education at NMK					
2.	Marks performance is effective method of monitoring distance education at NMK					
3.	Student feedback helps improve distance education at NMK					
4.	Implementation of distance education at NMK as increases revenue					
5.	Enrolment in the distance education at NMK has improved					
6.	Dropout rate is minimal since start of distance education at NMK					
8.	Distance education at NMK is alternative of devolving education					
9.	Distance education at NMK helps the Kenyan government in achieving vision 2030					
10	Telephone is an appropriate feedback mechanism to use in NMK distance learning					

11. In your view, are the current NMK feedback, monitoring and evaluation methods adequate?

a) Yes

b) No

If your answer is No, kindly explain your answer…….

……

12. How best can NMK improve its feedback, monitoring and evaluation?.....

……

Appendix 5: Questionnaire on Teachers characteristics

Read to respondent: "Kindly rate the following statements in respect to distance education in NMK in a scale of 1-5 where: 1= Strongly Agree, 2: Agree, 3: Undecided, 4= Disagree and 5=

		Strongly Agree	**Agree**	**Undecided**	**Disagree**	**Strongly disagree**
1.	Tutors technical skills are central to distance education					
2	Teachers conceptual skills influence distance education delivery					
3.	Interpersonal communication plays a significant role in learner-teacher relationships					
4.	NMK's ability to develop a curriculum in distance education serves as a pillar in the implementation of distance education					
5.	NMK teachers understanding of Legal concerns (e.g., copyright laws, etc.) help in the implementation of distance education at NMK					

6. In your view, do teachers' characteristics influence the implementation of distance learning at NMK?
   a) Yes
   b) No

   If your answer is yes kindly state some of those characteristics

   ……
   ……
   ……

7. In your opinion, what can NMK teachers do to improve on their characteristics in order to deliver competent distance learning programs?

   …….....
   .....

Appendix 6: Interview Guide

Jane Wangechi Murage
University of Nairobi
P.O Box 30197,
Nairobi, Kenya

Introduction

My name is Jane Wangechi Murage. I am a Master's student at the University of Nairobi (UON) undertaking research on factors influencing implementation of distance education at the National Museums of Kenya (NMK). I kindly request your contribution by answering the following questions geared towards the attainment of the research goal and objectives; and part of my study. The study findings will assist NMK leadership to understand the key factors that drive distance education and have great impact to both the learner and the institution. The information will be confidential and anonymous.

Question1: Institutional challenges:

i) In your view, is National Museums of Kenya prepared to undertake distance education in terms of policy guidelines and curriculum based courses

ii) Does NMK have in place a mechanism to conduct evaluation and feedback in distance education

Question 2: Teachers' Characteristics

i) Are National Museums of Kenya teaching staff members enough and trained to handle distance education

ii) In your own view, do the National Museums of Kenya teaching possess the knowledge about their learners diverse needs

iii) How are the Museums attitudes towards their learners?

Q3: Technological factors:

i) Does National Museums of Kenya have the adequate ICT infrastructure to run distance education programs?

ii) Do you think NMK teachers possess distance education technological skills?

Q4: Learner factors:

i) Do you think NMK learners are psychologically prepared for distance education?

ii) In your own view, how is NMK learners' view of information technology as a means of course content delivery?

Debrief and acknowledge that data is important and confidential

Thank you.

Appendix 7: Table for determining sample size for a known 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	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384
Note : N is the population size, S is the Sample Size									

Source: Krejcie and Morgan (1970) table