

# THE COMPLEXITIES OF DISTANCE EDUCATION, ONLINE LEARNING AND USE OF TECHNOLOGY IN LEARNER SUPPORT SERVICES

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## ABSTRACT

This article examines the complexities of Distance Education, online learning and Use of Technology in Learner Support Service in higher education in Kenya. Learning at higher education has gone through several changes since the invention of new technologies which can be used to enhance teaching and learning. In the field of education in both developed and developing countries, the impact of technology is being felt from the learners, teachers and community perspective. Distance education which has been used for ages in various higher institutions of learning changed a lot in its mode of delivery because of the use of various technologies. Since then, institutions have embarked on online learning which uses technology more. The paper tries to identify various types of support services which are offered by distance learning and how technology has created an impact on the services and how the education provides view technology in education. Tutorials and pedagogy are some of the key support services in the distance learning programmes. The findings of the study also indicated that lecturers were ready to adopt and use technology in course delivery as it is capable of improving the quality of teaching by distance and in online platform and also is capable of improving their interaction with the learners. The major conclusions of the study was that technology if fully integrated in the teaching and learning process, will have benefits in access to education, cost reduction, improved syllabus coverage and good learner and tutor interaction amongst others.

**Key words:** distance education, information and communication technologies, teaching, pedagogy, student support services

## 1.0 Introduction

Education institutions are changing to new method of teaching and learner support services. Many institutions which are using distance education are now forced to conform and use technology in their delivery. Kember (1990) noted that many students who are new in tertiary study are faced with the need to learn new conventions and recognize quite different conceptions of knowledge. This type of knowledge will be useful as they embark further in their studies. The role of universities in assisting new students is to take the learners through a good orientation process to enable them understand how the university courses can be offered in different modes and the services available to all learners.

Many changes have taken place in education but some concepts still remain the same. One of this is distance education which online learning borrows a lot from. According to Stella and Gnanam (2004):

Traditional campus based education is no longer the only mainstream delivery mode. Due to technological developments the last two decades has seen a significant increase in different forms of education and new education providers that have a global impact. They include a wide range of provisions that overlap, notably Distance Education programs that are delivered through satellites, computers, correspondence or other technological means across national boundaries twinning arrangements... pp 143.

According to Larreamendy-Joerns and Leinhardt (2006) they make a connection between the history of distance education and contemporary online education because the visionary promises and concerns that many current educators claim as novel actually have a past, one whose themes signal both continuities and ruptures. In essence, the genealogy of distance education can be traced from various perspectives one of them being the fact that:

The history of distance education constitutes not only a repository of experience with heuristic value but also the frame within which community of educators and the public at large may make sense of online initiatives (Larreamendy-Joerns and Leinhardt (2006)pp. 568

Keegan (1996) denotes that, despite the changes in distance education, its core features separation of instructor and learners, and the use of technology to enable communication between instructor and learner remain the same. Although many alternative terms like online learning, E-learning, mobile learning, and others are being used, definition of distance education still and others like online learning still varies in scope and critical

features( Holmberg,1986).He further noted that, distance education includes the various forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which nevertheless, benefit from the planning, guidance and tuition of a tutorial organization.

Online education forms the backbone of modern learning but it is still not equally practiced in most countries especially in developing countries where access to education for all citizens is still a challenge. However, it is advisable that in all circumstances, there is need for universities to closely examine their capabilities and capacity of their institution before overhauling the mode of delivery which has been in existing for some times. These arguments are predicated on a general assumption that students coming into universities have had a comparatively universal and uniform digital upbringing (Gregor et al.2008). It is assumed that the technological experiences of students are more or less homogeneous and that most, if not all, incoming university students are Digital Natives (ibid). It cannot be assumed that all students joining university at the same time have the same experiences in use of technology because of their various social and economic backgrounds, previous schooling locations and exposure to technology hence the need to treat each student differently in respect to use of technology in education.

In Kenya, the first government report which recommended other ways of acquiring higher education was the Ominde Report of 1964/65.It recommended the introduction of degree courses to be undertaken at the University College, Nairobi as part-time studies supplemented by short residential sessions. The Kenya National Development plans of 1966 and 1970) proposed the establishment of the external degree program. While according to Republic of Kenya Report (1999), the massive expansion of technology and the need to keep a breast of it was recognized .Since then various institutions have started distance learning programmes in a way to meet the needs of various cadre of their clientele.

## **2.0 Changing Trends in distance education**

Distance learning (DL) is not a new mode of delivery as it has been there for several years. In England, correspondence courses have existed as early as the 1840s. In the United States of America(USA)the University of Chicago is noted to have established a correspondence course unit by 1890s (Bates, 2004). At the University of British Columbia, where distance education has been since 1949, more than 105 courses are offered through this mode (University of British Columbia, 1998b). The revamped transformation in delivery and administrative structure in offering distance education has taken a major toll in most higher education institutions as they strive to use more Information, communication and technology (ICT) in supporting the learning process. Another successful distance program was realized in the Northern Virginia Community College which has matured as an American community college. Composed of five campuses, plus the extended learning institute, it serves the Virginia suburbs of Washington, DC. Its students come from Urban, suburban, and rural communities, covering every possible socio-economic and cultural group. The college enrolls over 59,000 different students a year (almost 21,000 fulltime equivalent students), with distance education being approximately 5% of the total college enrolment. A number of factors led to NVCC's ability to develop its distance education program into the large and diversified one that exists today. Some were the result of carefully planned strategies. Others were fortuitous accidents, unexpected outcomes, or pure luck that became part of the institutions' overall distance education strategy. The early years of distance education at NVCC had a strong instructional development focus (Haney, Lange, & Barson, 1968).

The way education is being offered to learners especially in universities have had a trajectory path with various universities developing various strategies of attracting students into their programmes. This has also been the case in distance education programmes whereby more universities are now using technological devices than before. Some of the old providers of distance education like The Open University of United Kingdom (OUUK) provide programmes to several undergraduate and postgraduate students wherever they are hence meeting the needs of global education. In India, the same scenario is replicated at Indira Gandhi National Open University (IGNOU) which also has millions of students underrating various courses in different parts of the world.

Distance education is also available in African Universities .In Kenya for instance, the university of Nairobi has been offering distance education especially the bachelor of education Arts programme has been in existence for over 30 years but prior to that, the university was offering short correspondence courses to deserving individuals who needed to develop various competency based skills. Kenyatta University in Kenya and other universities have also been meeting the needs of various students by offering distance learning programmes using various modes of delivery. One common characteristics of this distance learning programmes is that the various institutions have integrated technology in the services offered to students hence it is not the old distance education of pen and paper under brick walls.

Schwab (1962) examined the history of distance education in three major themes: democratization, liberal education and instructional quality. Democratization here means the increasing either access to higher education of the population that would be otherwise excluded, or increasing the range of people who might be served by the elite intuitions, liberal education in this case refers to education which is broad, deep, and philosophically anchored to sense of purpose and general utility as it attempts to shape a person's critical and analytic competencies with respect to disciplinary knowledge. And instructional quality refers to concerns and considerations about the effectiveness of teaching or instructional environments in the light of particular learning goals and educational standards. This history supports the progress of distance education as it moves to integrate more technology in its delivery.

The changes in distance education have had impact on the students, the distance education providers and other education stakeholders. 'Tried and true' print; audiotape and videotape materials, telephone communication and 'snail mail' are now enhanced by interactive technologies such as electronic mail and computer-mediated conferencing, making web-based instruction feasible for large numbers of people (Keegan, 1996; Khan, 1997). With the integration of emerging technologies, learner support services have also improved as noted by Bates (2004) and Keegan (1996) who stated that new technology connects learners and instructors wherever they may be for example, home or work, provides opportunities for cross-cultural discussion and collaborative project work, and enables learners to control when and where learning occurs.

Distance education enhances access to learning which is realized even at the University of Nairobi. This was confirmed by the records at the School of Continuing and Distance Education (SCDE, 2014) where student's population especially in the department of educational Studies has been at a round figure of about six hundred students per intake which is among one of the highest intakes at the University of Nairobi. SCDE has consistently offered the bachelor of education programme for a period of over 30 years through the distance mode using the Print media, cassettes, face to face tuition during the school holidays and other support services received by the students during their home study at the Extra Mural centres located in every County in Kenya. This trend has changed and the programme has since enhanced the learner support services through use of more ICT services in learner support services like library, tutorials, administrative services, examination management and other aspects of the course.

### 3.0 Effects of Technology on distance education instructional design

Various schools of thought believe that offering distance education in a more modern way with use of emerging devices can have an impact in the oldest mode of education delivery.

s old mode of delivery. Navarro et al. (2000) noted that the multimedia design of distance courses can enhance student learning and comprehension. While Sosin(1997) indicated that from an administrative position, online courses offer the opportunity to reach a large number of nontraditional or under-served audiences and afford greater flexibility in scheduling classes. These sentiments support the current status of distance education which has since then proved to be flexible as it takes learner's from different backgrounds who then take the various courses wherever they are through use of technology and other enhanced learner support services. Navarro (2000) noted the current trend in distance education and stated that'

'Today, most distance courses use digitized lectures, audio supplementation, discussion boards, and interactive software to incorporate the active use of writing, problem analysis, and collaborative learning'.

In its offer, distance education is as good as face teaching since it takes into account all the processes of effective learning and quality control measures. The opportunities that computer-mediated conferencing affords for collaborative, case-based and problem-based learning, as well as self-directed learning (Grow, 1991; Bridges, 1992; Dede, 1996). Szabo (1998) noted that, distance education enhances access to learning and can increase learning efficiency and achievement. While Threlkeld and Brzoska, 1994) stated that *distance* education can be at least as effective as face-to-face education .

Students support services are changing everyday as new ideas and concepts come into play. Because of the separation, the learning experiences are conveyed mainly through a learning package coupled with various forms of human support mechanism. A learning package or course or training material may consist of the printed text and other media and materials which are supported by trainers, tutors, facilitators and counsellors (Rowntree, 1991).

As institutions change their distance education delivery strategies, it is believed that the potential of electronic device to change the way education is being offered in higher education is still a priority area. Several

methodologies are available for developing and delivering distance programs in various higher institutions and each has different attributes and characteristics. Various technological devices like CD-ROMs though updated, pen drives are capable are storing large volumes of information but the trend has since then changed and they are new ways of storage online storage like online storage apps, online storage google, auctions and many more are currently in use more than the old ones.

#### **4.0 Different modes of distance education and benefits**

Obonyo-Diglolo (2009) in his study indicated that pedagogy in Kenya initially was conducted using two modes of delivery, namely the conventional and the distance teaching modes. This has since then changed and more innovative approaches are developed for use in education. Conventional teaching refers to the delivery of lesson to learners assembled in front of a teacher. Appelberg (1997) noted that, distance learning as a choice for non traditional older students as well as for practicing professionals is on the increase. Concurrently, demands for instruction to meet needs in the rapidly changing workplace (Adi, 2002) and advances in technology and offer both virtual and real-time two way interactive teaching and learning (Alvarez et al, 1998) have combined to make distributed learning environments both necessary and possible. Additionally, increasing demands on available on-site resources for education make distance learning (DL) appealing for major institutions of higher education. A further challenge for institutions is to select and support technology to deliver distributed learning instruction.

According to Bates(1995) and Keegan(1996),the various technologies in education connects learners and instructors wherever they may be for example, home or work, provides for control when and where learning occurs. Depending on the degree of standardizations of course and delivery methods, online learning may ensure consistency in content and process. Distance education at basic level is considered to takes place when a teacher and student's physical distance is bridged by technology for example voice, video data and print to close the instructional gap (Johnson, 2002). These types of programs are believed can give a second chance to college education, as it can enable those disadvantaged by limited time, finances or disability to update their knowledge base (Juma, 2004). Distance education continues to grow with more colleges offering courses and programs while experiencing increased student enrollment

Distance education since its inception has served the needs of learners with differ requirements and in different geographical locations but though face to face or through technology. Africa is one continent which has all the reasons to enhance distance education and online learning because of the various challenges realized in the education sector. Barrow(2004) notes that the continent is characterized by underdevelopment, poverty, increasing student population, financing of higher education and even unavailability of technology.

With the proliferation of many devices for learning and teaching purposes, many institutions need to take advantage of their presence .For instance, multi-media, CD-ROM, mobile phones, laptops, ipads te represent a significant wave in educational technology which if well exploited for academic purposes, can create an impact in the education system offered in developing countries especially where the education challenges are pronounced. Chute et al. (1999) asserted that, distance education offers an increased clientele base, improved services for students and more efficient use of existing facilities.

Papcharis et al. (2000) were able to report the results of a meta-analysis of 122 separate studies that compared individual with group learning with technology for various age groups. These authors found that learning in pairs was slightly more effective than learning individually despite the fact that there were differences according to: How the groups were composed that is Mixed-ability pairs did better than similar ability ones; secondly. The difficulty of the task showed that groups did better than individuals on more difficult tasks; thirdly, the nature of task that learners performed on closed than on open-ended tasks; and finally , on the gender, same-sex pairs did better than mixed-sex ones.

#### **5.0 Research Methodology**

The study was conducted at the University of Nairobi Kenya starting the period 2015 and ending 2017. Survey design was used and the study targeted students who were enrolled in distance education programme, their tutors, ICT and administrative staff. Stratified sampling was used in selecting students and administrators targeted for the study while random sampling was used for selecting lecturers and ICT staff. Questionnaires and interview schedules were used to generate information from the target respondents. Tutorials were one of the major variables of the study in this research. It covered the aspect of teaching and the learning process. The learner support centres outside Nairobi were also targeted in the study since they give an overview of the support services available outside Nairobi for the learners and especially on how technology is being used to serve the learners better and ensure quality in the programme.

### **6.0 Findings on technology use in distance education**

The study realized that, readiness to adoption ICT for teaching and administrative services is quite high as 77.7% of the lecturers out of the 45 who answered the questionnaires indicating their willingness to adopt to technology. While among the student respondents, the students' responses, the most highly rated elements of quality of teaching was the components where technology has been integrated and indicated good results were like administration of term papers, continuous assessment tests and release of examination results, processing of transcripts using ICT and access to information by students wherever they are. This study supports a study carried out by Gakuu (2007) which noted that, as instructors get more familiar with DE, and as their level of experience increases, the rate of adoption is bound to increase.

The respondents especially lecturer's preference of face to face teaching was still 50% as some lecturers still prefer face to face teaching against use of modern technology.

There was an urgent need to have more ICT enhanced services at the extra mural centres which are the key learner support services points at the University of Nairobi for the DE program. This will ensure relevance of information to the students by their tutors and even access to relevant study materials.

Mobile phone services by lecturers was one of the technologies which was mostly used because it is affordable, available amongst the students, faster and easier to use and the cost of using it to send short message services (SMS) is quite affordable even to the students.

Quality of teaching realized a mean grade rating of 4.1679 with a standard deviation of only 0.3840 by the students. This was an indication that the students rated technology mediated teaching process highly and same with the ICT staff.

The lecturers also agreed that some technologies like computers, internet browsing, use of LCD and other portable electronic devices should be integrated in the teaching and use by the lecturers. The study also found out that support services which are technology enhanced are very critical to distance program as it makes their course more affordable and appealing to those who are working or engaged with other activities.

Portable technologies like mobile phone were found to be popular among the students, lecturers and ICT staff. This could be because they are easily available, affordability and the quality services they offer to the user.

Distance education and online learning offers universities administrators the ability to democratize and decentralize education and offer courses in various geographical settings in a region. The respondents in this study indicated that learning using technologies is good but various measures have to be put in place to ensure that all learners are having available devices so that they are not disadvantaged in one way or the other.

For four persons with disabilities (PWDs) students who were respondents in this study, they indicated that online learning and distance education using various technologies could be suitable for them as it will give them a chance to have individualized learning without much movement and interference, they can assess materials online, interactive with other learners freely and be motivated to learn hence the concept of flexibility was also realized among the PWDs.

The respondents indicated that, distance education and online courses can take care of limited space which is realized at the university, Students using more technology in their learning will not require much physical space hence the university can utilize the available space for other activities like for use by conventional studies or for hire. The other aspect of flexibility of distance education and online learner was the fact that it permits students to study wherever they are despite any disruptions which can occur during the semester sessions. This is because he students are not physically present on campus to be affected by the disruptions.

Electronic mobile devices like ipads, laptops, and mobile phones among others were the ones the respondents indicated should be sourced more for the distance programme. Both students and lecturers prefer handling academic issues using their mobile devices.

In terms of quality of teaching, the university may benefit greatly or lose out if the level of ICT integration is not given adequate consideration. Students respondents who do not reside in Nairobi indicated that they do not have ICT infrastructure in the centres where the university has satellite Campuses. The students use internet services to get their reading materials and also do their independent study.

## 7.0 Discussions

In the students' responses, the most highly rated elements of quality of teaching was the components where technology has been integrated and indicated good results were like administration of term papers, continuous assessment tests and release of examination results, processing of transcripts using ICT and access to information by students wherever they are. This study supports a study carried out by Gakuu (2007) which noted that, as instructors get more familiar with DE, and as their level of experience increases, the rate of adoption is bound to increase.

Quality of teaching received a good mean grade rating. This was an indication that the students rated technology mediated teaching process highly. This concurs with findings by Keller (2005) that technology usage fosters collaborative learning and flexible learning opportunities independent from time and place and that it offers opportunities arising from cross-cultural use.

Various technologies can enhance learning as noted by the lecturers in this study. Mboroki (2007) was in support of this statement when he noted that, the distance education students cited internet as one of the sources they get information from for their academic work. This finding is further supported by other studies like Looi et al.(2009)who noted that seamless learning environment bridges private and public learning spaces where learning happens as both individual and collective efforts and across different contexts such as in-school versus after school, formal versus informal.

Portable technologies like mobile phone were found to be popular among the students, lecturers and academic staff. This could be because they are easily available, affordability and the services they offer to the user. This was supported by findings by Papcharis et al. (2000) were able to report on effectiveness of group learning in a technological environment.

The study also noted the enormous use of Electronic mobile devices like ipads, laptops, and mobile phones for academic purposes. This is in line to what Gakuu (2007) found that, irrespective of the learners age or tenure, they are willing to be trained in E-learning. These results also seem to agree with Nor Hapiza et al. (2003) study which concluded that there is a relationship between the level of ICT knowledge and readiness to adopt E-learning.

## 7.0 Conclusions

In spite of a number of constraints identified, the results showed that the level of preparedness to use technology in higher education at the university level was still low as the infrastructural system was still not well laid for all the students to benefit. This was seen as a major hindrance to the process of having technology mediated distance education and online system. On the overall rating of quality of teaching, and other related services using technology, it was quite good and encouraging to the university. Both the students and lecturers agreed that more technological devices should be used in the teaching and learning process in higher education. This will make education more personalized for the learners and lecturers will also have more chance of interacting with the students and other university staff most of the time when there is need without looking for them in their offices.

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