

# **THE ROLE OF E-LEARNING IN NIGERIA TERTIARY INSTITUTIONS: ISSUES AND CHALLENGES**

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## **Abstract**

*The educational systems are evolving and thus changing at great speed and technology is changing rapidly. The advent of modern technology (internet, weblog, audio technology and media, video technology and media, cell phone, table television, computer, telex and videotext among others), touches, improves and has significant impact on all aspects of human activity. When the new technologies are employed in education, given the right condition, they can accelerate, enrich and deepen basic skills in reading, writing, in the mathematics and the sciences. They can motivate and engage students to learn as they become more independent and responsible for their learning. Hence it is seen as an instrument or tool for change in teaching style, learning approaches, and access to information. E-learning is the use of technology whereby learning is conducted via electronic media, typically the internet. E-learning utilizes electronic technologies to access educational curriculum outside of a traditional classroom where the tutors are teaching, such as open and distance education settings.*

*E-learning despite its benefits, such as creative, active, collaboration, integrative, evaluative learning convenience, flexibility, effectiveness, interactivity among others, is yet to be fully utilized in Nigeria tertiary institutions. E-learning comes with it issues and challenges such as the authenticity of students' work, inadequate computers, lack of regular power supply, computer literacy of both teachers and learners among others. It is thus recommended that teachers should be given loans to acquire computers and regular in house training should be conducted for both teachers and students to be ICT compliant among others.*

**Keywords:** E-learning, Technology, Tertiary institutions, Teachers, Students.

Learning (education) is the acquisition of knowledge or skills through study, experience, or being taught. Learning starts right from birth and continues/ proceeds until death as a consequence of ongoing interactions between people and their environment and is acquired due to the prior experiences one had gained. To Meyer (2001) learning is the process of acquiring new, or modifying existing knowledge, behaviours, skills, value or preferences. Similarly, Burns (1995) cited in Ekekoka, Eze and Ettu (2013) regards learning as a relatively permanent change in behaviour which includes both observable activity and internal processes, such as thinking, attitudes and emotions.

The advent of modern technology (internet, weblog, audio technology and media, video technology and media, cell phone, table television, computer, telex and videotext among others) has touched, improved and had a significant impact on all aspects of human activity, education inclusive. Thus, it is seen as an instrument or tool for change in teaching style, learning approaches and access to information. The purpose of technology in education is generally to familiarize students, with the use and workings of computers and other related digital application. Hence the use of different technologies has become inevitable for students in learning as they can retrieve information within a short time, access and disseminate electronic information like e-books,

improve their learning, by using different modern technologies in form of wireless networks, internet, websites, databases among others.

Certainly, teaching and learning activities in campus/classroom based educational settings have conventionally been regulated by time and place, thus teachers and learners in these institutions are expected to be present at the designated places and time to engage in the educational activities. As a result, this mode of instructional delivery imposes constraints to both teachers and learners, who for various reasons are unable to be present in a required place and at the appointed time. Hence prevents large number of learners from participating in their educational development (Anvonye, Ukegbu & Iwu, 2015). Thus, the advent of e-learning technologies has helped to address this. It has led to the emergence and growth of correspondence education or open and distance education, thereby in the process was able to offer education to those who were unable to access campus/classroom based environment.

Web-based learning is commonly referred to as e-learning or online learning. It essentially includes learning online through the courses that are offered on the net. E-mails, live lectures and videoconferencing are all possible through the net. A web-based course would typically include course information, timetable, notice board, curriculum map, teaching materials like articles, slides and handouts, communication through discussion boards and emails, summative and formative assessment. Student management tools like statistics, records, and student tracking can also link to external websites that are also very useful. Hence, E-learning is learning utilizing electronic technologies to access educational curriculum outside of traditional classroom. E-learning (2018) views e-learning as courses that are specifically delivered via internet to somewhere other than the classroom where a tutor is teaching. Similarly, Economic times (2018) sees e-learning as a learning system based on formalized teaching but with the help of electronic resources where the use of computers and the internet forms the major component. To Talentlms (2018) e-learning offers the ability to share material in all kinds of format, such as videos, slide-show, word documents and PDFs, conducting webinars (live online classes) and communicating with tutors via chat and message forums.

There is a plethora of different e-learning systems (also known as Learning Management Systems, or LMSs) and methods, which allow for courses to be delivered with the right tool, thus, various processes can be automated such as a course with set materials and automatically marked tests. E-learning is an affordable solution which provides the learners with the ability to fit learning around their lifestyles, effectively allowing even the busiest person to further career and gain new qualifications (Talentlms, 2018). One of the main advantages of accessing pages on the web is that most of the web pages have hyperlinks that will lead you to another page and thus opens up a vast amount of information on the net (e-learning industry, 2018). E-learning, therefore can contribute to universal access to education, equity in education, the delivery of quality learning and teaching and teachers' professional development.

However in Nigeria, as in most developing countries, a large number of people are still behind in terms of the acquisition and the utilizing of the computing technologies for learning, hence this is seen as a barrier to effective tech-savvy in the educational sector. Despite benefits of e-learning, such as creative, active, collaborative, integrative, evaluative learning convenience, flexibility, effectiveness, interactivity among others, there are also limitation and challenges of this practice. Such challenges include inadequate computers, lack of electricity and low computer literacy by both teachers and learners, cost of data to access the internet among others. These have been a stumbling block to enhance e-learning and other computer related educational programmes.

### **Concept of E-learning**

Until the early 2000, education was a classroom of students with a teacher who led the process. Physical presence was not a barrier, and any other type of learning was questionable. Affordable e-learning solutions exist for both computers and internet, it only takes a good e-learning tool for education to be facilitated from virtually anywhere. E-learning offers the ability to share material in all kinds of formats such as videos, slideshows, word documents and PDFs. Conducting webinars (live online classes) and communicating with teachers via chat and message forums is also an option available to users. Thus e-learning is a rapidly growing

industry, the effect can be traced back to the 1980s and even well before that in the form of distant learning and televised courses (Talentlms, 2019).

Some of the most important developments in education have happened since the launch of the internet. Thus today learners are well versed in the use of smartphones, text messaging and using the internet to participate in and running an online course has become a simple affair. Message boards, social media and various other means of online communications allow learners to keep in touch and discuss course related matters, whilst providing for a sense of community. There is a plethora of different e-learning systems (otherwise known as Learning Management System (LMS) and methods, which allow for courses to be delivered with the right tool, various processes can be automated such as course with reference materials and automatically marked tests. E-learning is an affordable (and often free) solution which provide the learners with the ability to fit learning around their lifestyles, effectively allowing even the busiest person to further a career and gain new qualifications.

Overall traditional learning is expensive, taken a long time and the result can vary. The importance of e-learning is a given fact and it can offer an alternative that is much faster, cheaper and potentially better. Before the onset of the internet, distance learning has been course material being delivered by post and correspondence with tutors via mail. However with the internet, distance education began to offer wider range of interactive educational experiences as well as faster correspondence with students via email among others. Thus with introduction of the computer and internet in the late 20<sup>th</sup> century, e-learning tools and delivery method expanded. Technological advancements also helped educational establishments and students, reduced the cost of distance learning and helped in bringing education to a wider audience.

According to Economic times (2018) e-learning is a learning system based on formalized teaching but with the help of electronic resources. Economic times stated that the use of computers and the internet forms the major component of e-learning. E-learning can also be termed as a network to enable transfer of skills, knowledge and the delivery of education to a large number of recipients at the same or

different times. E-learning theory describes e-learning as the cognitive science principles of effective multimedia learning using electronic educational technology (Mayer, 2001). According to Aparics, Bacao and Oliverra (2016) the e-learning systems theoretical framework contains the three main components of information systems. These components are people, technologies and services. People interact with e-learning system, e-learning technologies enable the direct or indirect interaction of the different groups of users. The author posited that technologies provide support to integrate content, enable communication, and provide communication tools. E-learning services therefore integrate all the activities corresponding to pedagogical models and to instructional strategies.

E-learning is the use of technology to enable people to learn anytime and anywhere, whereby learning is conducted via electronic media, typically in the internet. E-learning utilizes electronic technologies to access educational curriculum outside of a traditional classroom where the tutor is teaching such as open and distance education settings. E-learning is a part of educational technology. According to Akude cited in Anuonye, Ukegbu and Iwu (2015), educational technology is a problem-solving approach that utilizes both process and products aspect, in solving educational problems especially those that border on teaching and learning. In essence it tries to make use of all the tools (technological products) and techniques (system or process approach) that are quite necessary for the purpose of providing a meaningful and interesting learning situation.

The educational systems are changing at great speed and technology is changing rapidly. Older technology is replaced by new technological phenomena and the new ones are being adopted and these are affecting the educational systems (Towhidi, 2010). Towhidi posited that when the new technologies are employed in education, given the right condition, they can accelerate, enrich and deepen basic skills in reading, writing, in the mathematics and the sciences. They can motivate and engage students to learn as they become more independent and responsible for their learning.

E-learning is a form of learning that goes through internet or intranet while using some instructional delivery technology. Ubaru (2008) cited in Akude (2015) viewed e-learning as the use of internet and digital technologies to create experiences that educate our fellow human beings. Ubaru posited that the use of e-learning is aimed at providing the same things that are possible in the traditional classroom and print learning to a geographically dispersed audience through electronic means. Thus the author noted that this can be through the internet, over the internet or just through an electronic medium such as compact disc. Ubaru (2008) identified three major types of e-learning devices as follows viz:

(i) Audio-Conferencing – This process represents a live-two way conversation among groups with different locations connected by telephone line or satellites, it requires a special microphone with amplifier device, preferably voice – activated, of each location (Heinich, Molenda & Russel, 1993). The authors posited that this involves the interlinking of more than two parties in a single call, so that everyone can hear everyone. This approach could be effective in long distance especially between the adult-learners in their homes or study centres and their course tutors as it is cost effective.

(ii) Video – Conferencing – This is an online meeting that could be holding between two or more participants at different sites or locations. They could be using such facilities as well as telephone lines or other cabling to transmit audio and video signals (Roblyer, 2003). This device enables a teacher in one location to see, talk and listen to students in one or more remote locations.

(iii) E- Books – These are electronic textbooks in which information is stored in form of Video Compact Disc (VCD), Digital Versatile Disc (DVD), Compact Disc (CD). Each of these e-books will facilitate individualized learning in which individual pays to learn from at his own convenient time and pace.

### **Advantages of E-learning**

The advantages of e-learning include viz: Ability to link the various resources in several varying format; It is a very efficient way of delivering course online; Due to its convenience and flexibility the resources are

available from anywhere at any time; People, who are part time students or are working full time, can take advantage of web-based learning; Web-based learning promotes active and independent learning; Ability to have access to the net all round, thus can train oneself anytime and from anywhere also; It is very convenient and has flexible options; above all, you do not have to depend on anyone or for anything; Not only can you train yourself on a day to day basis, but also on weekends or whenever you have the free time. There is no hard and fast rule; Through discussion boards and chats, one is able to interact with everyone online and also clear your doubts if any; and the video instruction that are provided for audio and video learning can be rewound and seen and heard severally if one does not understand the topic first time.

### **Open and Distance Education**

Recent distance education efforts are rely more and more on internet and other ICTs. The importance of transmitting instructional materials to distant learners through print, audio and video media to deliver instructional messages have always been stressed (Chung, 1991). These new technologies and media can be applied in both traditional and modern forms of distance educational system. Distance education is a kind of education in which teacher and learner are separated and instructional materials are carried through telecommunication systems. Distance education has been defined as an educational process in which a significant proportion of the teaching is conducted by someone removed in space and/or time from learner. Open learning, in turn, is an organized educational activity based on the use of teaching materials, in which constraints on study are minimized in terms of either access, or of time and place, method of study, or any combination of these. The term open and distance learning is used as an umbrella term to cover educational approaches of their kind whereby each teacher in his school, provides learning resources for leaners, or enable them to qualify without attending college in person, or open up new opportunities for keeping up a date no matter where or when they want to study (UNESCO, 2001).

In collaboration with this, Association for Educational Communication and Technology (AECT) (Schlosses, Ashland &

Simonson, 2002) cited in Issa (2013) sees open and distance learning as institution based formal education where their learning group is separated, and where interactive telecommunication systems are used to connect learners, resources and instructors. By their definition, there are four components that need clarification, the first concept is that distance education is institutionally based, that is, it is different from self-study; the second concept is the separation of the teacher and student; the third concept is synchronous or asynchronous interactive telecommunications which imply interactivity through electronic media (television, telephone and the internet) and not limited to only electronic media; the fourth concept is connecting learners, resources and instructions that interact while resources are available, they in turn help the learning process to occur. AECT mentions that the main goal of this form of education is to provide mass-produced courseware to a mass market, but notes, in recent emerging trends, that the goal of open and distance learning is to focus on local and individual needs and requirement.

Distance learning refers to the teaching and learning situation in which the instructor and learner engage in interactive instructional settings when they are separated geographically by time and space. The learner interacts with the system by means of input devices such as mouse, a remote control, keyboard among others. Mugridge cited in Akpan (2008) describe open and distance education as a form of education in which there is normally a separation between teacher and learner, and in printed, and written words, telephone computer conferencing or teleconference are used to bridge the physical gap. This means that open and distance learning provides educational environment needed by anyone, anytime and anywhere. To Kaufmen, Watkin and Anerra (2008) cited in Student's Information Book of NOUN (2008) open and distant education means the delivery of useful learning opportunities at convenient places and time for learners, irrespective of the institution providing learning conditions.

Open and distance education is viewed as a system for all and promotes life-long learning, fills the gap created by closure of satellite campuses across the nation and its cost effect in the education delivery system. It is also seen as improving the economics but at a deduced cost (Ezekoka et al. 2013). The authors posited that open and distant learning

education is seen as representing approaches that focuses on opening access to education and training provision, freeing learner by offering flexible learning opportunities to individuals and groups of learners. Holmberg cited in Akpan (2008) averred that open and distant education is a system of education that does not operate through traditional conventions, which are essentially restricted in terms of admission, attendance and subject combination.

Simonson (2005) posited that distance education as institution-based, formal education where the learning group is separated and where interactive telecommunication systems are used to connect learners, resources and instructors. To Pitman (2013), open and distance learning is a mode of delivering education and instruction, often on individual basis, to students who are not physically present in a traditional setting such as a classroom. Distance learning provides access to learning when the source of information and the learners are separated by time and distance or both. Michael Moore, cited in Anuonye, Ukegbu and Iwu (2015) viewed distance education as the family of instructional methods in which the teaching behaviours are executed apart from the learning behaviours, including those that are in a contiguous situation would be performed in the learners presence, so that communication between the teacher and the learner must be facilitated by print, electronic, mechanical or other devices. Accordingly Moore and Greg (2005) outlined the advantages of open and distant learning to include viz: lots of flexibility, no commentary, numerous choices for schools, lowered costs and learning while working. The authors also noted some disadvantages of open and distant learning to include viz: lack of social interaction, format not ideal for all learners, some employers not accepting online degrees, requiring adaptability to new technologies and not all degree courses may be offered online.

### **Issues and Challenges of E-learning in Nigeria**

E-learning in Nigeria is faced with several issues and challenges:

#### **Issues**

- i. Knowledge is only on a theoretical basis and when it comes to pulling to use whatever that had been learnt, it may be a little difficult;

- ii. Most of the online assessments are limited to questions that are only objective in nature;
- iii. The authenticity of a particular student's work is also a problem as online just about anyone can do a project rather than the student itself;
- iv. There is also the problem of the extent of security online learning programmes;
- v. The assessments that are computer marked generally have a tendency of being only knowledge-based not necessarily practicality-based.

### **Challenges**

#### **(i) Resistance to change**

There is an inherent resistance to change especially among older generation of teachers on the use of ICT in teaching and learning. Rutherford and Great cited in Ugwuogo (2013) identified the following nine areas that could prevent teachers from making changes that would help them integrate technology in their teaching.

Fear of change, fear of time commitment, fear of appearing incompetent, fear of technology, fear of not knowing where to start, fear of being married to bad choices, fear of having to move backward to go forward, and fear of rejection or reprisals.

#### **(ii) Lack of ICT Competent Technicians**

Related to low level of ICT skills of teachers and students, is the lack of technicians who can service and maintain facilities. Most times, where there is breakdown, months and years will roll-by before they are repaired.

#### **(iii) Poor Funding**

The overall funding of education in Nigeria is poor especially in this period of recession/depression. Low level of funding has resulted into inadequate procurement of ICT facilities. Most of these facilities are imported and the dwindling fortune of naira makes their cost very exorbitant.

**(iv) Corruption**

The high level of corruption in most developing countries like Nigeria, means money meant to improve education is diverted to private pockets.

**(vi) Low Level of ICT Skills by Teachers and Students**

There is low level of ICT skills among teachers and students. This low level of ICT skills is more noticed among the older generation of teachers. According Ugwuogo (2013) low level of skills in presentation software was noticed among teachers and students in a study conducted in Anambra State.

**(vii) Inadequate ICT Infrastructure, Facilities and Resources**

The computer to students' ratio is very high, Many computer laboratories do not have internet facilities. Wireless networks and free Wifi services are lacking in many public places and campuses inter training institution, absolute and low capacity technologies to mention but a few.

**(viii) Poor Power Supply**

Power supply from national grid is all time low and the use of private power sources is too expensive. Without stable and constant power supply it is difficult to keep ICT facilities functional.

**Conclusion**

From the above discussion it can be deduced that E-learning defines learning as neutral, social, active, integrative and conceptualized based on ability and strength of students. Using e-learning in teaching and learning can bring about a rapid change in the society. It has the potential to transform the nature of education, that is where and how learning takes place and role of learners and teachers in the process of learning. With the increased enrolment of students, who study at convenient time and place, e-learning becomes inevitable. It is also evident that despite the huge benefit of e-learning, there are also lots of challenges to be taken care of,

but which are surmountable if the government and relevant agencies are willing.

### **Recommendations**

Based on the above write up, the following recommendations were made.

1. Personal commitment: Teachers and students should personally devote their time and resources to develop and constantly upgrade their ICT skills. Thus training can be done in term of workshop or seminar within the weekends or holiday periods.
2. Mentoring: Those who have low ICT skills should attach themselves to colleagues who are more knowledgeable.
3. In-house training: Institutions, faculties and department, should organize ICT in-house training for their staff.
4. Government and school administration should lay equal emphasis on training of application users as well as technicians who will be competent enough in repairs, servicing and maintenance of ICT facilities.
5. The Nigerian Communications Commission (NCC) in collaboration with Digital Bridge Institutes should fest tract and expand their training on Advanced Digital Appreciation Programme to Tertiary Institutions (ADAPTI) to cover all tertiary institutions in the country as soon as possible.
6. Soft loans should be granted to tutors in tertiary institution through banks and cooperative organization to procure laptops and computer accessories.
7. During employment, ICT compliance should be one of the criteria for employment in tertiary institutions.
8. Administrators of tertiary institutions should make internet available in campuses.
9. Adequate to fund must be provided by the government and institutions administrators to initiate, develop, promote, renew and implement ICT availability and utilization. The government should also partner with the private sectors to attract more funds.

10. Government should declare a state of emergency on power sector with a view to coming up with a lasting solution to the lingering problem of power supply in the country.
11. Government should subsidize the price of ICTs sell them to teachers; this will help in their ability to use them for instructions.

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