

## IMPROVING THE QUALITY OF HIGHER EDUCATION IN NIGERIA THROUGH THE USE OF E-LEARNING

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### Abstract

*Higher institutions play leading role in the development of the nation through higher level relevant man-power training. A change in the society influences higher institutions and thus, provides a reciprocal and dynamic effect on the social environment. One of the social forces interacting with higher institutions today that holds the promise of improving the quality of higher education is E-learning. E-learning comprises of all the forms of electronically supported learning and teaching including edutech. In E-learning, the learning materials and course contents can be delivered using any of the electronic media like; internet, intranet, extranet, audio-visual tapes, Local Area Network (LAN), satellite Tv, CD-ROM, E-mail, Whatsapp, etc. Using e-learning, all learning experiences can be learned in just a click. With e-learning distance, time, space, access to updated learning materials, cost of traveling, risk of traveling, etc are no longer issues. Rapid changes in technologies are indicators that the role of e-learning in improving the quality of higher education is inevitable. It holds specific importance to Nigeria as the youth constitute its major population and there is no other better approach to take education in such scale without the*

*intervention of technology. This paper x-rays concepts of higher education, quality education and e-learning. It also discusses the types of e-learning; model of using e-learning in education and the ways e-learning can improve the quality of higher education in Nigeria. Recommendations and conclusion are also made.*

**Keywords:** Quality education, higher education, e-learning, synchronous e- learning, asynchronous e-learning, e-learning model.

## **Introduction**

Every nation invests in education because it produces unquantifiable benefits for individuals, organizations, government and the society at large. According to Udokang (2006), education is the provision of opportunity for a child to realize his/her potentials, goals and the abilities in life. It includes the acquisition of functional skills, moral identity and attribute to success in life and improvement of the society. The yearning needs, aspiration, cultural heritage and the environment of any society determine to a great extent the kind of knowledge and skills to be acquired (Adebosin, 2004).

Higher Education in Nigeria is the kind of education the produces manpower, intellectuals and future leaders. It is a place where students come together to pursue knowledge and it promotes the development of the nation (Ajayi. 2003; Olutola and Olutoye, 2015). Higher education educates the future leaders and higher-level technical capacities that underpin economic growth.

Higher education is at the center of human resource development and advancement. Therefore, instructional delivery in higher education setting must be done in the manner that students comprehend what is taught and apply such to solve problems where necessary. Traditionally, the main approach centers on teachers rather than the students. Here, the teachers determine the learning experiences to be taught, how to teach and thus, less concern about the students that are at the receiving end.

Today, books are gradually getting replaced by electronic educational materials like optical disc or pen drives. There are so many learning strategies being put in place to compensate for the challenges occasioned by the traditional face-to-face approach. Advanced in technology fueled by the use of computers have culminated in the supplementation and near phased-out traditional face – to – face educational delivery approach. In the past, these have included the use of mainframe computers, floppy disk, Multimedia, Compact Discs –Read Only Memory (CD-ROM) and interactive video disks, etc. These technologies according to Salawudeen (2010) allow for more flexibility and wider reach for education in many developed countries of the world.

In today's electronics society, e-learning has become a new epitome and a new delivery platform in education sectors that holds the promise of improving the quality of education. As contended by Kalaivani (2014), e-learning is all about learning that can be obtained by means of on-line technology. According to him, e-learning is an on-line knowledge acquisition through the internet or offline through CD-ROM. He further maintained that e-learning is the use of network technologies to create, foster, deliver and facilitate learning anywhere and at anytime.

As noted by Eke (2011), e-learning is a learner-controlled, self-paced education environment where learner has authority over the learning environment thereby allowing learners to work on their own pace and time. It has the potential to provide opportunity for reflective and integrating learning outcomes. It involves the use computers, mobile technologies (like; personal digital assistants and MP3/MP4 players), web based teaching materials and hypermedia as room or web-sites, discussion boards, collaborative software, email, blogs, wikis, text – charts, educational animation, simulation, games, learning management software, interactive learning, Computer – Assisted teaching and internet based learning.

Today, many Tertiary institutions have recognized the importance of E-learning in improving the quality of education. It is flexible in term of time, location and health. It increases the effectiveness of knowledge and skill by enabling access to a massive amount of data, and enhances collaboration and thus strengthens learning.

There is therefore a greater need for education system to embrace innovative styles of teaching and learning especially e-learning technology.

### **Concept of Higher Education**

Higher education is also referred to as post secondary or tertiary education. It is the education given after secondary education in colleges, monotechnics, polytechnics, universities and those institution offering correspondence courses (Federal Ministry of Education, FME, 2004). Higher Education in Nigeria is the kind of education the produces manpower, intellectuals and future leaders. It is a place where students come together to pursue knowledge and it promotes the development of the nation (Ajayi. 2003; Olutola and Olutoye, 2015). Higher education educates the future leaders and higher-level technical capacities that underpin economic growth.

Higher education is at the center of human resource development and advancement. Higher education is a critical part of human development. It is essential to the growth and development of any nation. This supports Peretomode (2007) who sees higher education as the facilitator, the bedrock, the power house and the driving force for the strong socio-economic, political, cultural, healthier and industrial development of a nation. A nation's ability to experience changes, overcome challenges and stay inform of the latest global development across all sectors is derived mainly from it educated populace.

As outlined by FME (2004), the aims of higher education include:

- i. Contribution to national development through high level manpower training*
- ii. Development and inculcation of proper values for the survival of the individual and the society.*
- iii. Development of the intellectual capabilities of the individual to understand and appreciate their local and external environment.*

For higher education of any country to contribute meaningfully to the production of balanced and analytical citizens capable of leading government and driving economics and industries, its quality has to be excellent.

## Quality Education

Quality is a desirable attribute of a product or service that distinguished it for the person seeking the attribute. Asiyai and Oghuvbal (2009) see quality as a measure of how good or bad the product or service is. According to them, quality education is a measure of how good or bad the products of higher education institution are in term of their academic performance and meeting established standards. According to the World Declaration on Education (2003) in Asiyai (2013), quality education is a multi-dimensional concept which encompasses all the functions and activities in school. Such activities as outlined in the article include; teaching, research scholarship, community service, staffing, students, infrastructures, educational facilities, equipment and environment.

Quality educations as outlined by UNICEF (2000) include;

- i. *Learners who are healthy, well-nourished and ready to participate and learn and supported in learning by their families and communities.*
- ii. *Environments that are healthy, safe, protective and gender sensitive and provide adequate resources and facilities.*
- iii. *Content that is reflected in relevant curricula and materials for the acquisition of basic skills especially in the area of literacy, numeracy and skills for life and knowledge in such areas as gender, health, nutrition, HIV/AIDS prevention, security, peace and ICT.*
- iv. *Processes through which trained teachers use learners-centered teaching approaches in well-managed classrooms and schools and skillful assessment to facilitate learning and reduce disparities.*
- v. *Outcomes that encompass knowledge, skills, and attitude and are linked to national goal for education and positive participation in the society.*

Over the past decades, the structure of higher educational institution has changed, partly due to the introduction of the technological initiatives. According to Cuban (1986) in Tinuoya and Adogbeji (2013), there has been a groundswell of interest in recent years on how e-learning can be adopted to improve the efficiency and effectiveness of education at all levels both in formal and non-formal settings. This is buttressed by Scott (2000) who contended that as e-learning is now facilitating a more flexible learning approach. According to him, contemporary institutional structures are less robust than the previous years. This is further amplified by Shaba (2000), who acknowledges the relevance of e-learning in improving knowledge, storing methods, learning techniques as well as acting as a catalyst for combating the inflexible delivery approach and the general quality in education.

Most technologically advanced countries of the world like United State of America (USA), China, Germany, Japan, etc that have given enough premium to higher education in a bid to prepare students for global relevance and competitiveness are reaping the benefits of e-education employability. As contended in UNICEF (2002) in Tinuoya and Adogbeji (2013), educational systems around the globe are under increasing pressure to use e-learning for quality education. The use of technology to improve the quality of education has increased dramatically in recent years. As new technologies are invented, they are integrated into the educational system to make teaching and learning easy and produce higher learning outcomes. The use of technology for teaching and learning started with television in 1970s, then progressed to video tele-conferencing in the 1980s, to computers in the classroom in the

1990s, to the social media technologies and e-learning in the 21st Century (Harnish, Bridges, Satteler, Signorella & Munson, 2018).

Each of these progresses has played significant role in improving the quality of higher education. One of the newest technologies which is already available and seems to have provided more flexible and valuable interactive learning that has to improve the quality of higher education in the 21st Century in e-learning. If Nigeria as a nation must improve the quality of her education therefore, the instructional delivery in her higher education setting must be done in the manner that students comprehend what is taught and apply such to solve problems where necessary. The essentials of e-learning in her educational system most especially in higher institution need urgent attention. Therefore,

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

E-learning is an acronym for electronic learning. E-learning is a learning system based on formalized teaching but with the help of electronic resources. It is a learning facilitated and supported by ICT to enable learners to learn anywhere and at anytime. E-learning is a general term used to refers to electronically – enhanced learning. Eke (2011) defines e-learning as a learning controlled, self-paced education environment where the learner has the authority over the learning environment thereby allowing learners to work at their pace and at their own convenience. E-learning is defined by Garisson and Anderson (2003) in Muhammed and Yusuf (2004) as a network or on-line learning that takes place in a formal context and uses a range of multimedia technologies. According to them e-learning is a learning system that is supported by electronic hardware and software either online (Synchronous) or offline (Asynchronous). It is a wide range application and processes designed to deliver instructions through electronic devices like Compact Disk-Read Only Memory (CD-ROM) or video conferencing through satellite transmission.

In the words of Cheng (2006), e-learning is “anything delivered, enabled or mediated by electronic technology for explicit purpose of learning”. Kalaivani (2014) sees e-learning as the type of teaching and learning that can be obtained by means of on-line technology.

E-learning in the context of this paper can be seen as a network enabled transfer of skill, concepts or knowledge through which the delivery of educational instructions is made to a large number of training participants at the same or different times. It is the use of technology to connect teachers and students who are physically far apart. In other words, e-learning is the use of multimedia to enhance learning. E-learning includes training delivery of just-in-time information and guidance from exports. It is a learning platform that provides anytime, anywhere easy access to up-dated knowledge and skills. In this platform, individual gets customized package related to key thematic areas via a self-guided process.

E-learning involves all kinds of electronic media by using all the potentialities of information technology. Its applications and processes include: Web-based learning, computer-based learning, virtual education and digital collaboration. According to Angib, Ibe and Eneji (2022), e-learning involves the use computers, mobile technologies (like; personal digital assistants and MP3/MP4 players), web based teaching materials and hypermedia as room or web-sites, discussion boards, collaborative software, email, blogs, wikis, text – charts, educational animation, simulation, games, learning management software, interactive

learning, Computer – Assisted teaching and internet based learning. They maintained that, e-learning has the potential to provide opportunity for reflective and integrating learning outcomes.

In e-learning platform, the learning experiences including the contents can be delivered using any of the electronic media like internet, intranet, extranet, satellite boards, video tapes, Local Area Network (LAN), CD-ROM, email, What Sapp, etc .According to Kalavaini (2014), all lesson in e-learning platform can be learnt in just a click.

Learning through this approach can engage learners' interest because it usually comes together with interactive pictures, texts, sounds, videos, collaborative sharing, etc. It can also be accessed anywhere, anytime provided a learner has computer and is connected to internet. E-learning may improve access to education and training, the quality of teaching and learning and thus marks the need for higher education to maintain competitive benefits in the changing market place for learners.

E-learning brings prove benefits to students and lecturers in terms of cost effectiveness and efficiency, encouraging students to take responsibilities of their own learning which will be of benefit to them. Moore (2004) stated that one of the advantages of e-learning is that it provides the students/learners with information that can be accessed in a setting free from time and place constraints. That is the students can go through the lessons at their own pace. Another benefit is that in many cases especially when lectures are recorded in a CD ROM, the material is media-rich information, including the video and audio forms of such multimedia. Also the progress and achievement of the student can be accessed in e-learning with custom feedback and evaluation available in an interactive environment.

E-learning initiative creates dynamic education portals that save time and money to both parties where they can experience the world of virtual learning. Once the e-learning hubs are strengthened, they can act as the back bone of learning, and provide support and resources for public schools, elementary high schools and local government institutions. With the right technology, e-learning enhances opportunities for interactive cooperative learning and the formation of communities of learners rather than relying on just the traditional face- to- face format.

### **Types of E-Learning**

Many scholars classified e – learning in many ways. While some educational scientists preferred to identify types of e-learning according to the different metrics like Synchronicity and learning contents. Some classified it based on the extent of their management in education and learning tools. However, we shall categorize e-learning in this study into two fundamental types based on the timing of interaction and the communication technologies used. Namely:

- i. Synchronous e-learning and
- ii. Asynchronous e-learning

### **Synchronous E-Learning**

Synchronous e-learning comprises of alterative access between teachers or instructors and learners or students. Synchronous e-learning is a real-time learning session. It is a kind of e-

learning when both the teacher and the students are online and interact with each other in real-time from different locations. It is a type of online learning that enables group of learners to participate in a learning activity together with their teacher at the same time.

According to Stafan (2007), Synchronous e-learning is any learning tool that is in real-time such as instant messaging that allows learners and instructors to interact; ask and answer questions immediately rather than learning on their own. He maintains that, in synchronous e-learning, learners interact with themselves and with their instructors. This is supported by Kalaivani (2014), who posits that e-learning involves the exchange of ideas and information with one or more participants during the same period of time. According to him, synchronous e-learning takes place with all the participants join at once as with on-line chat session or a virtual classroom.

This type of e – learning allows the learners to discuss with their instructors and also among themselves via the Internet at same time with the use of tools such as video – conference and chat rooms or, online chat. The learning contents and other resources can also be delivered and received via mobile devices, webinars, instant messaging, etc. One major advantage of this type of e – learning is instantaneous feedback.

### **Asynchronous E-learning**

It may be difficult for the entire training participants who enrolled for any e-learning course(s) to be online at the same time. This according to Stafan (2007) may be due to the absence of network connectivity and asynchronous nature of most participants (combining education with work, family and other commitments). All these may make it difficult for most training participants to be engaged in synchronous e-learning. Hence, the provision of offline learning, otherwise called “Asynchronous e-learning”.

Asynchronous e-learning is a type of e-learning that can be carried out when either, the teacher or the student is offline. Asynchronous e-learning also allows learners to discuss with the teachers/ or instructors as well as among themselves over the Net but at different times. It therefore, not interactive at the moment but later with the use of tools such as thread discussion and emails with a opportunity that learners are able to learn at their own convenient. According to Algahtani (2011), asynchronous e-learning allows all the e-learning participants to post communications to any other participant over the Net. Here the course contents can be set up ahead of time when access to internet connection is available and at convenience. Asynchronous e-learning is a learner directed and self-paced learning. It is a pause and resumes kind of learning. According to Kalaivani (2014), asynchronous e-learning is when learners complete self-paced online training. Stafan (2007) defines Asynchronous as a kind of learning where a participant may engage in the exchange of ideas or information without the dependency of other participants’ involvement during the same period of time.

In asynchronous e-learning, the students and the teachers are not online at the same time. The students complete the lesson on their own pace and merely use the internet as a support tool rather than venturing online solely for interactive classes. Asynchronous e-learning makes it possible for learners to log on to an e-learning environment at any time and download documents or send messages to teachers or peers (Stefan, 2007).

The coursework and every communications in asynchronous e-learning are delivered and received via the web, email, blogs, discussion forum, ebooks, CDs, DVD, messages boards, whatsapp, twitter, etc. The sole demerit of asynchronous e-learning is that, learners will not be able to receive instant feedback from instructors as well as their colleagues

### **Model for using E-Learning in Education**

Just as there are different types of e-learning, there are also different ways of employing e-learning in education. In this article, we shall discuss three distinct models of using e-learning in education. These include;

1. Adjunct model
2. Blended (mixed) model
3. Online model

#### **Adjunct Model**

Adjunct e-learning model is a situation in which e-learning is employed as an assistant in the conventional classroom given relative independence to the learners.

#### **Blended or Mixed Model**

In this model of e-learning, the delivery of course materials and the explanations is shared between the traditional learning method and e-learning methods in the classroom setting.

#### **Online Model**

This model is wholly online. It is completely devoid of the traditional classroom participation. Online model is an environment on the Internet created through the use of learning management system that allows students and teachers who are separated by location to connect either synchronously or asynchronously using technological tools such as video conferencing, audio conferencing, interactive online board, mega phone, email, Whatsapp, etc. In this model of e-learning, there is maximum independence of the students (Algahtani, 2011).

### **Ways E-learning can improve the Quality of Higher Education**

E-learning is a promising way of improving the quality of higher education. As noted by Kalaivani (2014), E-learning can give increased flexibility of learning experience to learners, enhances access to information resources for more students, potentials to derived innovative and effective ways of learning and teaching at very low marginal cost. However, the various ways e-learning can improve the quality of higher education are discussed in this paper under the following sub-headings:

- i. Cost – Effectiveness
- ii. Resources Scalability
- iii. Personalization
- iv. Accommodation of Every Individual's Needs
- v. Quick Lesson Delivery
- vi. Global Learning Institutions
- vii. Greater Accessibility for Students
- viii. Flexible Learning Environment
- ix. Consistency
- x. Unlimited Number of Time of Lectures

### **Cost – Effectiveness**

E-learning is highly cost effective when compared to the traditional face-to-face approach of learning. This is because, the expenses incurred on traveling to the training venue, study materials and accommodation (when the training holds in another town, city, state or country) can be reduced to the barest minimum. E-learning is extremely cost beneficial to any organization or institution.

### **Resource Scalability**

E-learning enables higher institution to serve a great amount of money and time. Institutions do not have to incur any form of expenditure in terms of hiring instrument, purchasing equipment or other resources. Rather they can use these saved resources to improve the quality of the entire learning process.

### **Personalization:**

E-learning imparts education in more personalized, distinct, specific and transparent manner. Learners can now choose to ask questions, leave feedback, get responses, seek repetition and clarify doubts base on their level of understanding.

### **Accommodation of Every Individual Needs**

E-learning is best suited for every individual. E-learning programmes can be taken by every individual (office goers, house wives, disables, etc) at the time that suits them. E-learning has brought remarkable changes on how the learning contents can be accessed, consumed and shared. According to Brown, Cromby and Staden (2001), e-learning offers individuals with disabilities the opportunity to further their education from home.

### **Quick Lesson Delivery**

As compared to traditional face-to-face classroom teaching approach, e-learning has relatively quick delivery cycles. It saves time as the training participants do not required to travel to the learning venue or center for the training. One can participate at his comfort and from any location. E-learning is much more sophisticated, dynamic and quick. Most lessons in e-learning are wrapped up within one academic season.

### **Global Learning Institution**

E-learning has allowed Higher Education Institution to expand beyond their local campuses and create global education services. This globalization network of education services as posited by O'Hearn (2000), enhances the domain of knowledge available to learners. According to him, global e-learning programmes provide real-time connections between learners who can share knowledge and resources like database, libraries, etc from anywhere, anytime. He further maintained that the growing access to less traditional education offer by e-learning has loosened higher education from the restriction of fixed locations. To support this, Brown, Cromby and Staden (2001) contend that e-learning has assisted in the education and rehabilitation of students with disabilities.

### **Greater Accessibility for Students:**

One of the most valuable qualities improved in higher education via the use of e-learning approaches and delivery platforms education when compared to the traditional face-to-face classroom approach to learning. Today both full time and part-time students can part-take in

any of the online courses of their choices irrespective of their engagement and location. This enables the training participant who travel or who are relocated ease access to learning resources and experiences. According to Sadler (2000), e-learning offers learners who have previously not had access to higher education the opportunity to study at the location that best suit their needs.

### **Flexible Learning Environment**

E-learning environment loosen the time and space restriction associated with the traditional face-to-face classroom settings. Hartley (2000) maintains that the constraints of conventional teaching practices with regards to group working are removed in e-learning environment as learners can participate in group activities without actually being confined in the same location.

### **Consistency**

E-learning enables teachers to get a high degree of coverage to communicate the message in a consistent manner for their target audience. This ensures that all students get the same type of training with the same learning approach.

### **Conclusion**

E –Learning approach does not only provide learning objectives. But can also evaluate the progress of the learners and the general quality of higher education. The Internet makes learning to be directed at one's current objectives. E – Learning which is noted to be suitable for distance and flexible learning can be employed in conjunction with traditional face – to – face classroom teaching. Nowadays, students not longer want to just learn by absorbing the contents. But want to learn to be by constructing the contents. They required interactivity and modern technologies like: e – learning, virtual learning, web learning, etc. Students are expected to use modern technology with the emergence of social networking, blogging, YouTube, etc to connect everything.

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