

PROMOTING BEST PRACTICES IN TEACHING AND LEARNING IN NIGERIAN UNIVERSITIES THROUGH EFFECTIVE E-LEARNING: PROSPECTS AND CHALLENGES

Grace Ifeoma Obuekwe, Ph.D¹ and Rose-Ann Ifeoma Eze, Ph.D²

¹*Department of Adult Education, University of Lagos, Akoka, Lagos, Nigeria*

²*Department of Educational Psychology, University of the Western Cape, Cape Town, South-Africa*

ABSTRACT

The importance of e-learning in our educational system as well as the nation's development cannot be over-emphasized. The use of e-learning in impartation and acquisition of knowledge by lecturers and students is becoming a vital tool in meeting the demands of education in the 21st century. The paper is aimed at exploring the prospects and challenges of e-learning towards promoting best practices in university education in Nigeria. It was discovered that effective communication between lecturers and students is enhanced through e-learning which has the potential to make learning to be realized faster and more efficiently than existing learning methods. However, literature revealed that the major challenges to e-learning remain that the various technologies used do not make provision for people who are visually impaired; unavailability of the equipment such as computers, digital technology, and internet for proper utilization due to cost; irregular supply of electricity, lack of both technical and social skills required for the implementation of e-learning. Recommendations made include the development of voice based e-learning applications for the visually impaired faculties and learners; recruitment of indigenous IT professionals for the development of low cost software packages; provision of incentives for private and non-governmental organisations that contribute to e-learning in Nigerian universities; Webinars, drills and workshops that engage participants in the active use of and development of e-learning technologies should be instituted at intervals.

KEYWORDS

E-learning, Multi-media learning, Information Communication Technology (ICT), Audio-visual, Virtual learning, Massive online open courses (MOOCs)

1. INTRODUCTION

The present age is the era of information revolution driven by e-learning. In many countries of the world, different fields of life such as business, travel, banking, entertainment, governance, security have witnessed rapid revolution as a result of the emergence of ICT. It is worthy to note that education is not left out as through ICT, teachers can now access a lot of information which they can transmit to the students. Dames (2001) notes that ICT motivates people to learn; enrich and deepen skills, promote individualised instruction, strengthen teaching by bringing the world into a classroom, relate school experiences to work practices and create economic viability for tomorrow's workers.

With a population of more than 170 million and a literacy rate of 72%, Nigeria has 153 universities, 40 Federal universities, 44 state universities and 69 private owned universities. The total acceptance rate into these universities is about 10% (JAMB, 2016). Few universities in Nigeria employ e-learning effectively in the teaching and learning process. These universities are mostly privately owned, one notable exception of government owned university is National Open University of Nigeria (NOUN).

It is widely accepted that teaching and learning of most courses in the university will be more effective with the use of ICT as it has the capacity to aid the students to construct knowledge by themselves through generating information via internet.

2. BODY OF PAPER

E-learning with the aid of information and communication technology (ICT), has the potential to expose a larger audience to improved learning opportunities. Omofaye (2007) opines that one of the easiest ways of making a nation become a successful economy is by turning such nation into a learning society. For effective impartation and retention of knowledge in learners, there must be a paradigm shift from teacher centeredness to learner centeredness which can be enhanced with the adoption of e-learning.

E-learning simply entails the use of ICT, electronic media and educational technology in education. It is synonymous with some learning platforms such as Internet-Based Training, Web-Based Training, Computer Assisted Instruction, Multimedia learning, Technology Enhanced Learning, Virtual Learning Environment, Virtual Education and M-Learning (Tawangarian, Leypold, and Nolting, 2012; Bates and Poole, 2013). E-learning can take place in and out of classroom. It may be. The pioneer of e-learning, Bernard Luskin interprets “e” outside electronic to mean exciting, enthusiastic, emotional, extended, excellent and educational while Parks (2013) suggested that “e” should refer to “everything, everyone, engaging and easy” in addition to ‘electronic’.

E-learning may be instructor led /synchronous learning or self-paced/asynchronous learning. **Synchronous learning** connotes the instructor-led type of learning where there is collaboration and exchange of ideas and knowledge among participants at the same time. It could be in the form of face to face discussion, video conferencing, chat room or virtual classrooms that bring all participants online working collaboratively at the same time in real-time for instruction and feedback (Robinson, 2008; Murali, 2010). **Asynchronous learning** which is self-paced uses e-mail, blogs, wikis, discussion boards, web-supported textbooks, audio, video courses, web networks, hypertext documents (Manprit, 2011). It allows participants to still exchange ideas and information without necessarily involving all participants at the same time. According to Johnson (2007), asynchronous learning affords people the time to complete their work in a less stressed environment and is especially beneficial to students who cannot participate in class activities in real time. Students can access and participate in variety of university courses online while working and still graduate with the class. Such e-learning resources afford students the opportunity to listen to lectures multiple times and reflect on the material without holding back the rest of the class.

2.1 Challenges

E-learning has been met with increased enthusiasm, however it is not without challenges in Nigerian Universities.

- I. Due to the fact that the options available for most learning environments are face to face, electronic mail, chat room, instant messaging, students with visual impairments have been left behind due to the lack of an accessible content delivery system to aid their disabilities. Lack of provision for voice in the existing learning methods has excluded support for the visually impaired as no blind person can see or communicate through mail or electronic means that require sight to see the board or computer screen and manipulate the computer keyboard for either data entry. There is paucity of research dedicated to the design and implementation of e-Learning for the disabled. However, some researchers (Azeta *et al.*, 2010) from Covenant University, Ota, Ogun State, Nigeria developed a prototype voice-based e-Learning application using the VoiceXML application development life cycle to proffer a solution that will complement the existing learning methods in a case study involving a school for the blind in Lagos, Nigeria. The assistive technology developed has the ability to fundamentally change the way teaching and training is delivered to the students of the school for the blind as proven in their case study and other schools alike. The voice-based e-Learning technology will improve accessibility to education, including distance learning for learners who are visually impaired in the school for the blind. By doing so, the group will not be completely neglected in the scheme of promoting ICT in education and learning.
- II. Another challenge is lack of both technical and social skills required for the implementation of e-learning which contributes to failure of e-learning projects. Some lecturers and students are not trained to make use of some of the e-learning equipment. This affects e-learning programme in our universities as a combination of connectivity, equipment and software will achieve anything if people

are not trained to use them. Aduke (2008) reported that the gross inadequacy of trained personnel is a challenge to the use of ICT in most Nigerian higher institutions and that this is also evident in NOUN which is a public university in Nigeria known for ICT use.

- III. There is also inability of teachers to assist the students develop the ability and knowledge necessary to make them use the e-learning effectively. Some e-learning studies conducted in developing countries show lack of vision and framework in implementing e-learning leading to failure of these e-learning projects (Kizito & Bijan, 2006; Pal, 2006).
- IV. Limited or lack of internet connectivity in many developing countries including Nigerian Universities impedes access to e-learning. Cost of Internet connectivity which is a major driver of ICT in education in Nigeria is so high, thus most students make use of pay-as-you-surf Cyber cafes whose charges are very high despite their poor service and slow rate of their server.
- V. Lack of funds to acquire cutting-edge equipment needed for implementing e-learning. The high cost of ICT gadgets is a major barrier to the success and adequate employ of e-learning in the country. The government bears a greater percentage of the economic costs of education in Nigerian federal and state universities most of which have significantly larger student populations than private institutions. With the annual increase in number of applicants and matriculants, the expenditure on education is becoming a huge burden to the government. Economic costs of implementing e-learning would fall on the students many of which are already below the poverty line.
- VI. Epileptic power supply: The abysmal state of electric power supply is a major setback in the implementation of e-Learning. Irregular and interrupted power supply in Nigeria is a perennial problem that affects every aspect of the economy including education. Ajadi, Salawu and Adeoye (2008) argued that it has been a major setback for technological advancement in the country. Most rural areas in Nigeria are not even connected to the national grid which makes it difficult for students residing in such areas to use ICT effectively.
- VII. There is also the problem of conservative attitude displayed by both faculties and students in resisting to change from traditional pedagogical methods to a more innovative, technology based teaching and learning methods. E-learning faces a major bottleneck in our institutions as most of the universities do not inculcate ICT based courses in their curriculum and the equipment such as computers, digital technology and internet which are required to facilitate learning are not available for proper utilization.

2.2 Prospects

The contributions of e-learning as proposed by several scholars include cost-effectiveness, enhanced responsiveness to change, consistency, timely content, flexible accessibility, and providing customer value (Olomo, 2001); Personalized instruction, Content standardization, Accountability, On-demand availability (Bhuasiri, Xaymoungkhoun, Jeung and Cigenek, 2011). E-learning should be seen as a tool to ameliorate several challenges facing higher education including the move towards lifelong learning, demand for continuous professional development, and the drive to wider participation.

E-learning based on the benefits it provides to stakeholders in educational sector is valuable in ways such as:

- I. Increase in accessibility to information: we are at the edge of a wave of innovation in tertiary education. Massive online open courses (MOOCs) have gained much attention. ICT based MOOCs hosted by companies such as edX, Coursera, Udacity, Alison courses, MIT open courseware, Khan Academy among others can engender novel approaches to teaching and learning in Nigerian universities. It is expected that with the formal introduction of MOOCs in the university education program, there would be transition of learning to a transformative and remarkably informative process involving flipped classrooms, interactive problem identification and increased capacity building via problem solving while sustaining increased peer interaction not just with students in one lecture hall but between students across various time zones of the world.

- II. On-demand availability because learning can take place anytime and anywhere which increases retention of knowledge. The application of e-learning can achieve just-in-time learning with greater reach irrespective of location (whether on the move, at home or work), speed of response and consistency of message. The sequence of lecture and homework assignments can be reversed, online materials can be administered as assignments before peer and tutor interactions with the purpose of enhancing the learning process and improving preceptorship.
- III. Self- pacing allows fast and slow learners to go on their speed in any course respectively without slow learners being neglected. Every learner is engaged to progress at his/her own pace without any feeling of frustration.
- IV. E-learning, fuelled by the use of sophisticated learning tools, media and ICT is aimed at augmenting the learners' experience thus making education learner-centred. It also builds confidence in learners as it increases retention due to hands on application unlike in traditional teaching and learning methods. This motivates and sustains the learners' interest to a large extent as well as makes them to be actively involved in learning.
- V. Ease of accessibility to e-learning facilities provides opportunities for professional development of workers. This can be possible through web-based courses, webinars and tutorials.
- VI. Nigerian higher education system currently has 153 universities, 40 Federal universities, 44 state universities and 69 private owned universities. Every year, about a million students apply to enrol into these universities but barely 10% of them are enrolled (JAMB, 2016). One of the reasons for which candidates are not admitted into the degree programs for which they applied is limited space and inadequate infrastructure. E-learning platforms for degree programs in which students can participate in class activities online could be instituted. A significant number of candidates can be admitted into such online programs where they can still obtain a degree under the terms of the university.

2.3 Recommendation for Improvement

- I. Inadequate power supply and funding remains a bottleneck to the development of e-learning in Nigerian Universities in the public sector. The tertiary education system stands to benefit immensely from cutting-edge ICT equipment, stable power supply and an increased budget allocation for e-learning initiatives. There is need to increase the annual allocation on education by the government at both the federal and state cadre to facilitate adequate provision of e-learning equipment and steady power supply in the universities.
- II. Indigenous IT professionals could be recruited for the development of software packages for e-learning which can be made affordable at a low cost to students in the universities.
- III. Paramount to the success of e-learning is a basic understanding of computer function and ICT literacy. Provision should be made for routine training of faculty, IT operators and students on the operation and use of functional e-learning systems in place. Webinars, drills and workshops that engage participants in the active use of and development of e-learning technologies should be instituted on a periodic basis.
- IV. There is a need for incentives for private and non-governmental organisations to contribute to e-learning in Nigerian universities. For instance, a moderate tax reduction benefit could be offered to institutions that contribute to the development of e-learning in Nigerian universities. Such private-government partnerships are needed to ameliorate challenges associated with sole funding by the government.
- V. At the centre of e-learning is equitable accessibility to the internet. Fast internet with a wide bandwidth that allows for connection of multiple users at the same time which would be of tremendous benefit to e-learning in Nigerian universities should be made available at an affordable cost.

- VI. Custom-designed ICT subjects should be incorporated into the curriculum at the secondary school level. Exposure at the pre-varsity stage would help get students acclimatized to and interested in e-learning and prepare them ahead of time. This principle of *the earlier the better* would also contribute to reduction of cost of training in the long run.
- VII. Voice based e-learning applications for the visually impaired faculties and learners must be developed so that this group will not be completely neglected in the scheme of promoting e-learning.

3. CONCLUSION

E-learning in education remains an evolving trend in Nigeria. Nonetheless, it has tremendous potential to improve productivity in the educational sector. With the challenges facing e-learning in the Nigerian university education system notwithstanding, e-learning demonstrates a huge potential if employed and utilised adequately. The prospects, challenges and recommendations as regarding e-Learning in Nigerian universities has been elucidated in the paper. It is therefore expedient to focus attention towards factors that will promote the effectiveness and enhance delivery of e-learning in Nigerian universities so as to satisfy the needs of all stakeholders to a large extent.

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