

REVAMPING EDUCATION IN NIGERIA: A CASE FOR E-LEARNING



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Abstract

Almost every sector of the Nigerian education system needs reform and restructuring. From the primary level of education to the tertiary level, from school infrastructure to curriculum development to assessment modals all require overhauling to accommodate global trends. Given the challenges that confronted the Nigerian education system during the corona virus global pandemic, the need to revamp the education sector to incorporate digitalized technologies is imminent. This paper makes a case for e-learning. The environment, types, and benefits of e-learning are discussed and recommendations made.

Keywords: E-learning, revamping, conventional, synchronous, asynchronous.

Introduction

The education system in Nigeria is structured majorly on a traditional or conventional teaching and learning approach of one-on-one, face to face, classroom teaching and learning. A clearer picture of conventional or traditional teaching is made by McCarthy and Anderson (as cited in Li, 2016) who define it as a teaching method involving instructors and the students interacting on a face-to-face manner in the classroom. The instructors initiate discussions in the classroom and focus exclusively on knowing content in textbooks and notes. Students receive the information passively and reiterate the information memorized in the exams. This basically describes our system of teaching and learning in the country. Unfortunately, this conventional teaching couldn't work during the corona virus pandemic and the resultant national lockdown as movement was restricted and schools closed down and nobody was in school for teaching and learning to go on. The only option was for teaching and learning to go digital on online platforms. This was a huge challenge for Nigeria

(especially the public schools) as the concept of e-learning is almost a novelty and with a populace who could not afford the resources. With the gradual easing of the lockdown, reopening of schools is in the pipeline. It is imperative that the present education system be revamped and the curriculum overhauled to accommodate a more digitalized platform as e-learning that would stand the test of time.

E-learning stands for electronic learning. It implies any learning that takes place with the aid of electronic devices such as computers, radio, television, the internet, smartphones, tablets, etc. It is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom (elearningnc.gov, 2020). E-learning here means the use of electronic technologies to access the curriculum. Teaching and learning is done through electronic means. Guri-Rosenbilt (as cited by Tamm, 2019), defines e-learning as electronic media used for various learning purposes ranging from conventional classroom add-on functions to online substitution for face-to-face meetings with online encounters. This definition views e-learning as being first, a part of the conventional classroom set up and second, as a substitution of the conventional classroom learning. In other words, when a teacher employs electronic media in teaching in his classroom it is e-learning and when he substitutes the usual face-to-face traditional teaching with online teaching, it is also e-learning. Since e-learning is electronic learning, it simply means the utilization of electronic devices or resources in teaching and learning. It does not necessarily imply only online learning. This view of e-learning contradicts e-learningnc.gov (2020) view of e-learning as courses specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. They did not see it as a course delivered via a DVD or CD-ROM, video tape or over a television channel but as an interactive process where one can communicate with teachers, professors and other students in a classroom in live streaming or pre-recorded session. This is indicative of an e-learning environment which is defined as the collaborative interactions used for knowledge acquisition within the online computer mediated digital system (IGI Global, 2020).

Our conventional approach to teaching and learning failed the country woefully during the long months of the corona virus pandemic lockdown. Academic calendar that could have continued even with the lockdown through online teaching and learning was abruptly suspended and the whole system was put on hold. This scenario necessitated the total restructuring of the education system to meet global trends. One of such global trends is digitalization of the education system. Education going digital may work in other advanced countries of the world but may not necessarily be a success in Nigeria because of the peculiarities of the Nigerian situation. Prominent among these are the economic background of the student population. Forty-point one percent representing 82.9 million Nigerians are poor **Invalid source specified**. A greater percentage of Nigeria students come from this background and such may not afford the digital electronic devices needed for digital learning. Internet accessibility is another

peculiarity as there are no widespread internet coverage especially in the remotest part of the country. Incessant power outages would render learning impractical.

This paper therefore advocates for revamping the education system to marry the two –the traditional and the digital. Traditional / conventional learning is imperative as that teacher/ student interaction is important. E-learning should be complementary and supplementary to conventional learning. There are many types of e-learning, some do not need internet access while some require internet accessibility.

Types of E-Learning

There are several ways to classify e-learning. It could be classified based on learning tools or synchronicity and learning content, it could be computer-based or internet-based (Tamm, 2019). For the purpose of this paper e-learning is classified as computer-based e-learning and internet-based e-learning.

Computer-based E-learning

Computer based e-learning refers to e-learning medium that requires only the computer without any internet connectivity in teaching and learning. They are not required to take place online. Any learning that utilizes the computer without going online is computer-based e-learning. Computer Managed Learning (CML) and Computer Assisted Instruction (CAI) are computer-based e-learning (Tamm, 2019).

Computer Managed Learning/Instruction (CML)

Computer Managed Learning or Instruction is used to provide learning objectives, resources and assessment of a learner's performance. **Invalid source specified.** IGI Global (2020) proffers two definitions of Computer Managed Instruction as teaching and tracking process in which the learning environment is enhanced with the use of a computer. It refers to the use of computers and software to manage the instruction process. What Computer Managed Learning does is to enable the teacher manage the instructional process effectively but it does not carry out the actual instruction. It more or less aids the teacher in the instruction process.

Computer Assisted Instruction (CAI)

While Computer Managed Learning serves as aid to the teacher, Computer Assisted Instruction (CAI), is the use of computers to present and facilitate instruction. According to Britannica (2020), Computer Assisted Instruction is a programme of instructional material presented by means of a computer or computer systems. Wikieducator (2018) sees it as an interactive instructional technique whereby a computer is used to present the instructional material and monitor the learning that takes place. Here the computer is used to present the actual instruction. It is a self-learning technique, usually offline/online, involving interaction of the student with programmed instructional materials. It could also be defined as the use of the computer

as a tool to facilitate and improve instruction Computer Assisted Instruction could be offline or online but it is used to facilitate and improve instruction.

Internet-based E-learning

There are two types of internet-based e-learning, synchronous e-learning and asynchronous e-learning.

Synchronous E-learning

Redmond, Parkinson, Mullally & Dolan (2007) defines online synchronous learning as a real-time, instructor-led online learning event in which all participants are logged on at the same time and communicate directly with each other. To IGI Global (2020), it is an online learning that takes place real time from various remote locations; communications occurs at the same time between individuals, and information is accessed instantly. In synchronous e-learning the students and the teacher interact in real time. Everyone is logged on from their different locations at the same time. It is a normal classroom situation only that it is virtual. Questions can be asked and be answered. All the participants can see and interact among themselves. Just as in a normal classroom, a student can raise his hand to ask for clarification and be responded to. Synchronous e-learning utilizes internet resources such as audio and video conferencing, live chats, webinars, webcasts, application sharing, interactive learning models, zoom meeting, instant messaging, etc. (Neelakandan, 2019; Chen, Ko, Kinshuk & Lin, 2005).

Asynchronous E-learning

In asynchronous e-learning, the teacher and the student are not online at the same time. It is a sort of a prerecorded session where learners can access their lesson content at their convenience. The Glossary of Education Reform (2013) explains it as a general term used to describe forms of education, instruction, and learning that do not occur in the same place or at the same time which applied to various forms of digital and online learning where students learn from instruction -such as prerecorded video lessons or game-based learning tasks that students complete on their own – that is not being delivered in person or in real time. Tamm (2019) describes it as where groups of students study independently at different times and locations from each other, without real time communication taking place. Learners learn at any time, they can download documents any time and can chat with teachers and their classmates at any time. Everyone is not online at the same time. Asynchronous e-learning is flexible as it allows students to learn at their own time. It is a self-paced learning. Chats, threaded conferencing systems, discussion boards / forums, CDs, DVDs, email, eBooks, electronic mailing lists, wikis, message boards, blogs, etc. are some of the media used in asynchronous e-learning (Hrastinski, 2008; Wikipedia, 2020).

An education system that embraces and incorporates these types of e-learning, Computer Managed Instruction, Computer Assisted Instruction, synchronous and asynchronous e-learning to the conventional is the best approach to the solution of our educational shortfall. This would enable the nation forestall any hiatus that would occur in future. A juxtaposition of the conventional and e-learning would ensure continuity in education even when there is a reason to suspend schools and restrict movement, teaching and learning would always continue anywhere and at any time. It would also facilitate qualitative education as information and communication technologies would be part and parcel of the system. There are immense benefits to adopting e-learning to the education situation. These benefits are discussed below:

Learn from the Comfort of your Home

E-learning is the best form of teaching and learning during the pandemic lockdown as one can study anywhere and any time. One can study in the comfort of his home. Unnecessary movement to and fro the lesson venue is reduced as everything is done at a place.

Gupta (2017), identified the following as benefits of e-learning:

Online Learning Accommodates Everyone's Needs

This type of learning can be taken up by anyone, anywhere. E-learning is not location restrictive, white and blue-collar workers, housewives, virtually everyone can take up online learning and at the time that best suits them. Gupta (2017) asserts that online education can be taken up by office goers and housewives too at the time that suits them.

Lectures can be Taken Any Number of Times

Online learning is unlike classroom teaching in that one can access the lesson content an unlimited number of times and affords the learner the freedom to attend lectures whenever he wants with ease (Gupta, 2017). In other words, online learning enables the learner to access lesson contents at unlimited number of times and to attend lessons at their convenience.

Offers Access to Updated Content

With e-learning, course contents can be updated immediately, changes can be made at any time so that students can access information that is always up to date **Invalid source specified..** Online learning offers learners access to updated materials whenever they want them.

Quick Delivery of Lessons

With e-learning, the time required to learn is reduced as students have the freedom to determine their own speed of learning with lessons starting quickly and

ending just as quickly. Savage (2019) explains that e-learning facilitates a reduction in learning time up to 60% by ensuring that a single lesson session wraps up the entire lesson, students didn't have to keep up with the learning speed of the entire classroom, elimination of commuting, and sole focus on learning material areas relevant to the students.

Scalability

According to Savage (2019), scalability enhances the effects of learning and teaching processes, helping both parties involved; the reach of educators in e-learning is virtually infinite, with money and time saved, more resources can be preserved as well. E-learning helps in creating and communicating new training, policies, concepts, and ideas (Gupta, 2017).

Consistency

E-learning is consistent in that it affords students the same experience irrespective of when the lesson is accessed. According to Purin (2018), e-learning eliminates the susceptibility of mistakes due to instructors' differences in teaching methodologies as online learning provides consistent and standardized training every time as each learner goes through the same experience regardless of when and where they take the course. Students receive exactly the same lesson session whenever they were able to access it.

Reduced Costs

E-learning is cost effective because learning takes place quickly and easily and anywhere. E-learning requires only the software which is cost effective and comparatively cheap, and learners and employees can receive their learning and training at home **Invalid source specified..**

Effectiveness

E-learning platforms are designed with illustrations, infographics and other vivid images, it is highly effective to understand the information being presented. It results in better retention, helping the students achieve better grades as against the traditional way of plain lecturing which is in textual format **Invalid source specified..** With e-learning, information is retained for a much longer time and also facilitates the ability to learn faster.

Less Impact on Environment

E-learning is eco-friendly, because it is paperless, it protects the environment to a lot of extent from CO2 emissions as distance-based learning programmes consume about 90% less power and generate 85% less amount of CO2 when compared with the

traditional way of teaching and learning. There is also no reason to cut trees for obtaining paper (Gupta 2017).

Other benefits of e-learning include:

Accessibility

There is no geographical boundary in e-learning. It eliminates all restrictions thereby allowing individuals from all over the world to complete the courses or training they are interested in **Invalid source specified..** E-learning also allows students who are not physically present in a classroom to still access the lesson. E-learning can happen in any place as long as there is a device and connectivity and students can access lessons sitting anywhere in the world **Invalid source specified..**

Mobility

Students can study at any place and at any time. The issue of travelling for classes is eliminated. Students can study and work at the same time, perform house chores and study at the same time as e-learning affords them the mobility and flexibility of studying at their preferable time. Savage (2019) posits that e-learning gives students the chance to study at any place and at any time, accommodating their needs perfectly.

Self-paced Learning

E-learning enhances students readiness to develop and improve at their own pace. E-learning makes it possible for students to study at their own time thereby enabling full time workers to study at their convenience without having to sacrifice in class attendance. Students who study online can plan their own time schedule, without having to make personal sacrifices in order to meet the class attendance requirements of teachers and traditional universities, imbuing in such students the merits of efficiency, effectiveness, convenience, scalability, and reusability (Tamm, 2019).

Student – centered

E-learning is student centred as students control their own learning experience and tailor class discussions to meet their own specific needs, leaving their own individual contributions to the course and at the same time taking away a unique mix of relevant information **Invalid source specified..** E-learning makes students the focal point instead of teachers. It promotes student-to-student interaction and peer grading. With e-learning it is all about the student, rather than the teacher.

Flexibility

E-learning time and resources are flexible. There are no restrictions on time and location as learning can be access any time, any place.

Conclusion

A lot of anomalies exist in the education sector. As have been pointed out earlier, the educational system is designed along conventional classroom learning. This emphasis on the traditional method of teaching and learning was our undoing during the long period of the coronavirus lockdown. This is a clarion call for the revamping of the education system. This paper advocates for the blending of conventional learning with e-learning. It highlighted and discussed the various types of e-learning that would work for the country as well as the benefits of e-learning to education.

Recommendations

This paper makes the following recommendations:

- That modalities to incorporate e-learning as in the education system be put in place before reopening of schools.
- That the curriculum should be redesigned to allow for online learning. This means that some course contents would be designed for strictly online teaching. This would make both teachers and students take the innovation seriously.
- That teachers be properly trained on ICT and e-learning media.
- Internet connectivity should be affordable and accessible.
- Power supply should be stabilized to ensure for continuity of the learning process.

References

- Adesoji, B. S. (2020, May 4). Over 82 million Nigerians are poor, northern states dominate list. *Business News*. Retrieved from www.nairametrics.com
- Britannica. (2020). Computer Assisted Instruction. Retrieved from <http://www.britannica.com>
- Chen, N. S., Ko, H. C., Kinshuk, & Lin, T. (2005). A model for synchronous learning using the internet. *Innovations in Education and Teaching International*, 42(2), 181-194. Retrieved from <https://www.eric.ed.gov>
- elearningnc.gov. (2020). *What is eLearning*. Retrieved from www.elearningnc.gov/what_is_elearning
- Gupta, S. (2017, November 11). *9 Benefits of eLearning for Students*. Retrieved from eLearning Industry: <https://elearningindustry.com/cdn.ampproject.org/v/s/elearningindustry.com/9benefits-of-elearning-for-students/amp>
- Hrastinski, S. (2008, November 17). Asynchronous and Synchronous E-Learning. Retrieved from <https://www.er.educause.edu>
- IGI Global. (2020). *What is Computer-Managed Instruction*. Retrieved from IGI Global: <http://www.igi-global.com/dictionary>

- IGI Global. (2020). What is synchronous e-learning. Retrieved from <https://www.igi-global.com/dictionary/synchtonous-e-learning/28981>
- Li, Y. W. (2016). Transforming conventional teaching classroom to learner-centred teaching classroom using multimedia-mediated learning module. *International Journal of Information and Education Technology*, 6(2), 105 - 112. Retrieved from <https://www.ijiet.org>>vo16
- Muktewar, V. (2020). 7 benefits of e-learning we all can reap. Retrieved from <https://theknowledgereview.com/7-benefits-of-e-learning-we-all-can-reap-elearning-industry/>
- Neelakandan, N. (2019, December 31). Benefits of synchronous and asynchronous elearning. Retrieved from <https://www.elearninglearning.com/synchronous/?open-article-id=11914732&article-title=benefits-of-synchronous-and-asynchronous-e-learning&blog-domain=wizcabin.com>
- Periasamy, N. (2020, March 7). 7 reasons why elearning is beneficial. Retrieved from <https://www.elearningindustry.com>
- Pinto, R. (2020, June 15). E-learning: The advantages and challenges. Retrieved from <https://www.entrepreneur.com/article/351860>
- Purin, S. (2018, November 16). 5 advantages of e-learning. Retrieved from <https://www.trainingindustry.com>
- Redmond J., P. A. (2007). Synchronous e-learning: Three perspectives. In I. M. (Ed.). (pp. 175-180). Springer, Dordrecht. Retrieved from https://doi.org/10.1007/978-1-4020-6262-9_31
- Rosell, C. D. (n.d.). Advantages of e-learning. Retrieved from <https://www.cae.net/advantage-of-elearning/>
- Savage, K. (2019, July 18). 11 Advantages of elearning in education. Retrieved from <https://blog-fullfabric-com.cdn.ampproject.org/v/s/blog.fullfabric.com/11-advantages-of-elearning-in-education?amp>
- Tamm, S. (2019, December 21). *What is E-learning*. Retrieved from [e-student.org: http://www.e-student.org/what-is-e-learning/](http://www.e-student.org/what-is-e-learning/)
- The Glossary of Education. (2013, August 29). Asynchronous learning. Retrieved from <https://www.edglossary.org>
- University of Illinois Springfield. (2020). Strengths and weaknesses of online learning. Retrieved from <https://www.uis.edu/ion/resources/tutorials/online-education-overview/strengths-and-weaknesses/>
- Wiki, T. I. (2020). *Computer- managed instruction*. Retrieved from The IT Law Wiki/ Fanton: <http://itlaw.wikia.org>>wiki>computer...
- Wikieducator. (2018). Computer Assisted Instruction (CAI). Retrieved from <http://www.wikieducator.org>

Wikipedia. (2020). Asynchronous learning. Retrieved from
<https://www.en.m.wikipedia.org>