



COVID -19 Pandemic and Online Teaching Practice in Nigeria Public Tertiary Institution: Lesson from Ladoke Akintola University of Technology

Yinus S.O^{1,2}, Alimi A.A^{1,2}, Adeyemi A.S^{1,2}, Akindele A.T^{1,2}, Olagoke H.B¹, Tajudeen Sanni², and Christine Kabasinguzi²

¹Open and Distance Learning Centre, Ladoke Akintola University of Technology, Nigeria.

²Kampala International University, Kampala, Uganda.

Corresponding email: yinusoluwaseun003@gmail.com

Abstract

Teaching and Learning online via new and emerging technologies, is arguably one of the most powerful responses to the growing need for education in the era of a pandemic. The extent to which eLearning influences learning and academic calendars in the pandemic era become a debate among the stakeholders in the educational sector, this study is therefore carried out to examine the influence of eLearning practices on the education system in public tertiary institutions using Ladoke Akintola University as one of the Nigerian public universities that adopt the online education system as approved by the National University Commission (NUC). Despite the threat of COVID-19 on the education system worldwide, this selected university in Oyo State of Nigeria set the record straight by making the education system function and thrive through eLearning practice. An online questionnaire instrument was administered via google form with four hundred (400) responses received from random participants, all of whom are students of LAUTECH, Open and Distance learning Centre, Oyo State of Nigeria. Of the four hundred (400) responses received, Two hundred and Sixty (260) responses were found useful for the study, as others were inconclusive. Data collected were analyzed using descriptive statistics like table and percentage. Analysis from the study revealed that eLearning practice has a significant influence on the education system during the pandemic era and further identifying high-impact teaching ethics toward effective online education which include: Effective Instructional Design strategies in Contents and Courseware adaptation; timely delivery of lecture to students using Learning Management System (LMS); adoption of social media to complement the LMS in social and peer interactions; access to adequate learners support system provided by administrators, advisors, and counselors; high-quality assurance by governing authorities and competency reports of all stakeholders being generated for review to improve the quality of education given to the learners.

Keywords: *Online Teaching, Learning Management System (LMS), Quality Assurance, Technology-Driven Appliance (TDA), COVID-19 Pandemic*

Introduction

COVID-19 pandemic has shaped a new normal for higher education institutions across the globe. With the lockdown imposed by most nations of the world, institutions had to integrate online learning platforms, restructure most of their operating processes, and engage crisis management strategies. Although the COVID-19 eruption has opened the prominence of online education and distance learning, it has also impacted prominent institutions of developed nations such as Canada, the United Kingdom, and the United States with decreasing educational income, because foreign students either abandoned their studies or were sent home (Eduventure, 2019).

The pandemic has led to school contests which do not have the online learning framework. Recent studies have shown that deployment of technology has paved way for new and efficient operation relying on any corporate organization based on the availability of information and communication technology devices and the internet in which educational sectors are not excluded. (Adeoye, Adanikin, and Adanikin, 2020; Oladejo and Yinus 2020; Pingle, 2011; UNESCO, 2020).

The use of technology-driven tools like the internet, computers, smartphones, and others handheld devices has made it possible for teaching, learning worldwide without the need to travel around, based on this fact the use of e-learning serve as an alternative learning method during and after the COVID-19 pandemic and how it influence learning and academic calendars become a debate among the stakeholders in the education sector. However, despite the enormous benefits of e-learning practice, most universities in Nigeria failed to embrace it. The extent to which the use of e-learning practices can complement quality education worthy of exploration in the Nigerian context

Research Hypothesis

H₀₁: eLearning practice has no significant influence on the education system in the pandemic era.

Literature Review

Learning and COVID-19 pandemic

There is doubt that the COVID-19 pandemic has changed the dimension of learning and teaching in the education sector worldwide, this compliment transformation of learning and development programs to the eLearning domain. The concept of e-learning has to do with online learning and teaching through network technology is arguably one of the most important responses to rising educational needs. Different researchers have expressed concern about the learning outcomes for e-learners, but a study of 355 comparative studies shows no substantial difference between conventional and e-learning delivery modes in learning outcomes, typically calculated as grades or test results. To excel in e-learning programs, organisations and educational institutions need to recognize the advantages and disadvantages of the various e-learning approaches and methods.

Evidence from literature (Kumar Soni, 2015, Oye, N.D. & Salleh, Mazleena, 2012), revealed that several eLearning techniques can be created with advanced development tools, which are suited to the needs of the modern workplace learners. Different forms of eLearning solutions can be employed to train learners. Choosing the right implementation

methods directly impacts the institution's efficacy by keeping in mind the tools available that can support access methods for eLearning.

Approaches to eLearning

Many eLearning approaches are Synchronous and Asynchronous, depending on the needs of the learner and the learning goals you select.

- **Synchronous Learning.**

Synchronous learning occurs in real-time. Synchronous contact between two entities allows both to be present at a given time. Live chat and Com, video and audio conferencing, online webcasting, application sharing, whiteboard, voting, and virtual classrooms are examples of synchronous learning.

- **Asynchronous Learning.**

Asynchronous learning is self-reliant and time-independent. A self-paced course is an example of asynchronous learning since at any time online learning takes place. Examples of asynchronous networking methods include e-mail or discussion fora. In such situations, students preferably complete the course at their speed, using a learning platform like LMS. Examples of asynchronous learning include self-paced, audio/video, email, discussion group, wiki / blog, webcasting/conference, CBT and WBT, simulations, and game-based learning.

- **eLearning Design**

E-learning design can also refer to as the instructional design model. This model serves as a means by which educational institutions and other corporate training institutes solve learning and performance problems, and the accessibility to educational technology which is considered as energetic for the acquisition and dissemination of knowledge to students, as well as the interaction between instructors and students. There are various design models for e-learning practice but these include the widely recognized prescriptive design models. ADDIE Model, Bloom Taxonomy, Gagne Nine Instructional Cases, 4C-ID Model (Jeroen van Merriënboer), Algo-Heuristic Theory (Lev Landa), ARCS (John Keller), Ensure (Heinich, Molenda, Russel, and Smaldino) Backward Architecture (Wiggins & McTighe), Cognitive Learning (Edmondson), among others.

Of all these models the ADDIE model is the generally accepted standard in an African country such as Nigeria. ADDIE model is the standardized framework commonly used by instructional designers and training developers that has five phases: Study, Design, Development, Implementation, and Assessment provides a complex, scalable template for the development of successful training and performance support instruments. In the

adoption of eLearning as an option for complimenting quality education, certain Learning Content needs to be considered. The types of content for learning include

- **Learner-centered content Curriculum.** Elearning should be appropriate and unique to the needs, tasks, and obligations of the learner in professional life. This kind of material, such as skills, information, and all kinds of learning media offered to keep the emphasis on the end of the learner.
- **Involving content.** To create an enjoyable and inspiring learning experience, the instructional approaches and strategies should be used creatively. It depends on designing the storyboard which must be based on a very engaging learning programming approach.
- **Interactive content.** Frequent contact with learners is important to maintain focus and to facilitate learning. Scenario-based learning is an excellent example of such learning tools.
- **Personalization.** Self-paced courses should be flexible to represent the desires and needs of the learner; tutors and facilitators should be able to personally monitor the progress and success of the learner in instructor-led courses.

Development of eLearning Practice in African Context

In most African countries, in which Nigeria is not excluded the commonly adopted method of eLearning is Blended or Integrated learning. Blended learning or integrated learning approach combines both the Synchronous and the Asynchronous ways of learning. Blended learning provides a good transition from classroom learning to e-learning. This is a combination of a face to face and online learning. This practice encourages educational and information review beyond the classroom settings. Blended learning combines several different delivery methods, such as collaboration software, web-based courses, and computer communication practices with face to face instruction

A blended approach works better to follow in an environment where lessons and discussions are performed using the classroom. These activities cannot be carried out in eLearning delivery because there is little peer participation. It is possible to build short e-courses to help the learners prepare a history for the lesson before they come to class.

According to Adeoye, Adanikin, and Adanikin, (2020) some universities in Nigeria have embraced e-learning as a means to ensure that their academic calendar is not distorted through the use of Several e-learning platforms such as Zoom, Microsoft teams, google hangout (meet), skype, Bamboo learning, google classroom, Docebo, WizIQ, Adobe captivate, Elucidat, Blackboard learn amongst others. However, these platforms are far-

reaching since they are complemented by the use of the LMS. The learning management framework originated directly from the idea of E-learning.

Learning management systems were developed to recognize training gaps, use analytical data, and report. It focused on providing online learning but supports several applications, serving as a hub for online content, including courses based on both asynchronous and synchronous content. An LMS may offer instructor-led training or a flipped classroom, used in higher education, for classroom management. Modern learning management systems provide a logical framework for making automatic recommendations for courses based on the skill profile of a student as well as collecting useful data from learning materials to make it much more efficient to use.

The benefits of e-learning Practice

The implementation of the university e-learning system would increase the pace at which information is gained. E-learning provides students with a platform to engage with themselves through the discussion forum which removes the participation barrier. It also facilitates good contact and promotes connections between students and lecturers or tutors. It also enables students to learn at their open speed and convenience as the lecture material is readily available and the lecturer's content delivery is very transparent to them. Hence, learning joy increases and learning anxiety reduces.

The experience of e-learning practice would expose both lecturers and students outside of the classroom world environment as learning is a globalized world. E-learning is powerful on the bill. Arkorful and Abaidoo (2014) believed that in educating students, the cost-benefit of e-learning is smaller than that of physical communication (face-to-face). This was done after considering certain factors such as the number of qualified students; the distance to be traveled; training time. Guragain (2016) also argues that the expense of the creation, delivery, and maintenance costs of face-to-face communication content is predominantly high compared to lower-cost e-learning. All of these serve as a pointer to the adoption of e-learning as a mechanism for learning tasks, especially during the recent Covid-19 pandemic era.

Challenges of eLearning Practice and Remedy

Several factors might be responsible for the shortcomings of the e-learning system in public universities such as

- I. Cost of Virtual communication: The means of putting audio and video conferencing, for example, are very expensive, not always practical, and often not a complete face-to-face substitute. Several steps need to be placed in place to keep learners engaged online:
 - Group building: developing a team of learners who work for the same goal and helping each other places an internal burden on all participants for growth and achievement.

- Simple instructions and a good user interface keep users from getting confused and giving up within the system. Within the atmosphere, users need to feel at home.
 - Mix online learning with real face-to-face meetings (hybrid learning) to allow all participants and synchronize their success in learning
- II. Lack of training: There is a deficiency in adaption for self-Training and development by the learners and stakeholders in the education sector.
- To achieve a successful framework of quality learning, learners, and stakeholders in the education sector should bear in mind that participation in training is a real reward and at the same time a personal opportunity.
 - Offer additional benefits that are directly related to the performance of the training to ensure immediate impact.
- III. Sustainable internet facilities amongst others are vital issues toward the adoption of e-learning in the Nigerian tertiary institution. The aforementioned factors coupled with the university union incessant strikes play a key role in the set back of public universities' academic activities during the COVID-19 pandemic in Nigeria. the public universities largely depend on government subvention
- IV. Learning by using computers: often promoting teaching or studying by using a Laptop is painful for the eye and wellbeing compared to reading from books is more pressure on the eyes and this can also prevent online learning.
- One of the potential ways to prevent this scenario is also to use media other than the screen, e.g. audio voices that illustrate certain things or provide activities that do not need a computer monitor to look at, and not anything that needs to be accomplished or performed using the Device. There isa possibility for the future that display quality will change dramatically.
- V. Difficulty in installing non-computer experienced person: There is a need to differentiate between installing the device and using it. In reality, the implementation is a complex activity that must not be reduced to technical components such as setting up the system and its technological infrastructure but must also involve the organizational framework needed to make e-learning a success. Unfortunately, the use of the system is often too vague and ambiguous for the various types of users and leads to inappropriate and inefficient usage.
- Designers and developers of e-learning environments must put more emphasis on accessibility, compatibility, and modularity to solve this problem, keeping it easy and intuitive.
 - Users can enjoy using the system which also contains no or very few bugs from such systems.
 - The system's advantages must be clear to all the positions involved (learner, teacher, author, administrator, and decision-makers who pay for all of this).

VI. Issue of developing and moving e-content online through Learning Management System: The creation of high-quality e-learning courses is time-consuming, costly, and lacks the availability of online course materials through the Learning Management System platform. Furthermore, LMS setup is a complex process that must not be reduced to technical parts such as setting up the system and its technological infrastructure but must also involve the organizational framework needed to make the e-learning system a success. Finally, the use of learning management systems (LMS) is very complicated for non-computer savvy people. Among other measures to mitigate all of these weaknesses:

- The designers and developers of e-Learning environments must make LMS simple, understandable, and easy to use.
- One of the possible ways to cut down costs for creating course content material is to reduce the amount of material used and substitute it by other learning concepts such as online collaboration.

High-impact teaching principles toward effective online education in Tertiary Institution

To achieve smoothly learning through an eLearning platform several principles need to be put in place. This includes the following

- The principle of appropriate relevant technology.
- Combining online learning and offline self-learning effectively
- Teamwork with online teaching assistants and lecturers in the faculty toward gaining online supports. Since most of our university's faculty is insufficiently qualified or funded to operate online educational platforms, support from teaching assistants is especially significant.
- The principle of an effective method of delivery of lecture need to be considered, due to students' characteristics of low concentration in online learning, it is essential to adjust the teaching speed to ensure the effective delivery of teaching information.
- The concept of learner support and AIG need to be well embraced because students need to provide timely feedback, including online video tutoring and email guidance after class.
- The principle of high-quality participation. It is necessary to adopt some measures to improve the degree and depth of students' class participation.

Methodology

All students of LAUTECH, Open and Distance Learning Centre (LODLC) Oyo state made up the population of this research. A simple random sampling technique was adopted

toward the selection of students in the Accounting, Marketing, Nursing, and Computer program of the selected Institution to achieve the study objectives. Ladoke Akintola University of Technology was selected on their dedication to quality education with eLearning practices and as one of the Nigerian public universities implementing the online education system through delivery of lecture and assessments via LMS, and exams was conducted via remote proctoring. Other academic activities such as seminars, conferences, and project defense (capstone projects) were done online using technology-driven innovative applications like zoom and other virtual communication means. An online questionnaire instrument was administered via google form with four hundred (400) responses received from random participants, all of whom are students of LAUTECH, Open and Distance learning Centre, Oyo State of Nigeria. Of the four hundred (400) responses received, Two hundred and Sixty (260) responses were found useful for the study, as others were inconclusive. Data collected were analysed using descriptive statistics like table and percentage.

Results and Discussion

Analysis of Learners perception on Influence of eLearning practice on education system in the pandemic Era

Analysis from Table 1 reveals that the majority of the respondents (77%) of the total respondents agreed; (13%) of them disagreed while (10%) of the respondent are undecided on the fact that Elearning practice does not alter basic learning procedure in the traditional system. Hence these shows that Elearning practice does not alter the basic learning procedure but rather complements the learning strategies toward achieving a standard education system.

Similarly, the table indicates that a large number of respondents, (75%) of the respondents agreed that Elearning practice will enhance universal e-content in globally in tertiary institution, (9%) of them disagreed, while (16%) undecided. Hence these show that Elearning practice will enhance universal e-content globally in tertiary Institutions which will eradicate discrepancy in learning practice in tertiary institutions globally.

More so, Analysis on the table revealed that the majority of respondents (78%) of the respondents agreed that the use of delivery methods such as Lms video conferencing and audio conferencing, internet worldwide websites, and computer-assisted instruction increases the possibilities for how, where, and when learners can engage in lifelong learning practice, (16%) disagreed while (6) were undecided. Hence the results show that the use of an appropriate delivery method such as Lms video conferencing and audio conferencing, internet worldwide websites, and computer-assisted instruction increases the possibilities for how, where, and when learners can engage in lifelong learning practice.

Furthermore, (70%) of the respondent agreed that the Adoption of E-learning is among the most important explosion driven by the internet transformation, (14%) disagreed while (16%) were undecided. Hence the results show that the Adoption of E-learning is among the most important explosion driven by the internet transformation during the pandemic Era. Finally, findings from the analysis reveal that also reveal the majority of the stakeholder opined that there is a significant relationship between elearning and Quality Education at (86%). Based on the overall results, the null hypothesis is rejected while the alternative is accepted. Showing that eLearning practice has a significant influence on the education system in the pandemic Era.

Table 1 Analysis of Learners perception on Influence of eLearning practice on education system in the pandemic Era

QUESTIONS	SA	A	D	SD	U	TOTAL
Elearning practice usage does not alter the basic learning procedure	145 (55.77)	55 (21.15)	20 (7.69)	14 (5.77)	26 (9.62)	260 (100)
eLearning practice will enhance universal e-content globally in tertiary Institutions.	86 (33.08)	109 (41.92)	8 (3.08)	17 (6.54)	40 (15.38)	260 (100)
Use of Delivery methods such as LMS video conferencing and audio conferencing, internet worldwide`11` websites and computer-assisted instruction increases the possibilities for how, where, and when learners can engage in lifelong learning practice	76 (29.23)	128 (49.23)	25 (9.62)	16 (6.15)	15 (5.77)	260 (100)
Adoption of E-learning is among the most important explosion driven by the internet transformation during the pandemic Era	84 (31)	100 (39)	16 (6)	20 (8)	40 (16)	260 (100)
There is a significant relationship between elearning and Quality Education	128 (49.23)	62 (23.85)	18 (6.92)	16 (6.15)	36 (13.85)	260 (100)

Source: Author's Computation, (2020).

Conclusion

Analysis from the study revealed that eLearning practice has a significant influence on the education of sample public tertiary institution during the pandemic era and further identifying high-impact teaching ethics toward effective online education which includes: online instructional design and Courseware adaptation; effective delivery of lecture to students using learning management system; high relevance of adequate support provided by administrators to learners toward learning; high-quality assurance to improve the depth of learner's learning management toward effective learning practice

Recommendations

- To achieve a successful system of quality learning, learners, and stakeholders in the education sector should bear in mind that participation in training is the real reward and at the same time a personal development.
- The learners are encouraged to influence their learning experience by using technology

- The benefits of eLearning systems, such as the learning management system, must be clear for all the positions involved (learner, teacher, author, administrator, and decision-makers who pay for all of this).
- E-Learning designers and developers must make LMS easy, understandable, and user friendly for all users.

References

- Arkorful, V. & Abaidoo, N. (2014). The role of e-learning, the advantages, and disadvantages of its adoption in Higher Education. *International Journal of Education and Research*, 2(12), 397-410
- Guragain, N. (2016). E-learning benefits and applications. Helsinki University of Applied Sciences Thesis. Retrieved from: <https://www.theseus.fi/bit>
- Pingle, S. S. (2011). Higher education student's readiness for ELearning. *Techno LEARN*, 1(1), 155-165
- UNESCO (2020). COVID-19 Educational Disruption and Response. Retrieved from: <https://en.unesco.org/covid19/educationresponse>
- Oladejo, M.O, and Yinus S.O, Electronic Accounting Practices: An Effective Means for Financial Reporting Quality in Nigeria Deposit Money Banks. *International Journal of Managerial Studies and Research (IJMSR)*, Volume 8, Issue 3, March 2020, PP 13-26.
- N.D. Oye, M. Salleh, and N.A. Iahad,(2012) "Challenges of E-learning in Nigerian University Education Based on the Experience of Developed Countries," *International Journal of Managing Information Technology*, vol. 3, no. 2, pp. 39-48
- Adeoye, Adanikin, and Adanikin, (2020); COVID-19 and E-Learning: Nigeria Tertiary Education System Experience. *International Journal of Research and Innovation in Applied Science (IJRIAS) | Volume V, Issue V, May 2020|ISSN 2454-6194*
- Amit Kumar Soni, (2015) eLearning design and development. <https://elearningindustry.com/choosing-right-elearning-methods-factors-elements>
- Eduventure, (2019). Report Looks Back at Previous National Crises to Anticipate Pandemic-Related Changes in Academic Program Demand Boston, MA – August 12, 2020. <https://encoura.org/resources/press-room/>