

## Full Length Research

# Contemporary Challenges of E-Learning: Matters Arising From Post COVID-19 Era.

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Accepted 31 May 2024

This paper examined contemporary challenges of e-learning: matters arising from post COVID-19 era. COVID-19 has come and gone but the world has not fully recovered from the effect of the pandemic. This study adopted a descriptive research design of the survey type. The sample comprised 355 students selected through simple random sampling technique. Questionnaire was used as instrument for data collection. The study found that Telegram was the most prominent e-learning platform for on-line teaching followed by WhatsApp, Learning Management System LMS (EKSU) portal and zoom. It also found that smart phones were the most available ICT equipment for e-learning. It also revealed that e-learning tools enhanced collaboration between lecturers and students, greater involvement of students and poor network was a major challenge of online teaching and learning followed by lack of access to e-learning tools. The study concluded that the use of E-learning in instructional delivery was not fully implemented in Ekiti State University. It was therefore concluded that all stakeholders should be fully involved in the provision of all the is needed to make E-learning to fully take off and both lecturers and students should be trained and retrained in the use of E-learning equipment.

**Keywords:** Contemporary, Challenges, E-learning, Post COVID-19, Era. Matters, arising

**Cite This Article As:** Owoeye, P.O., Oluwatumbi, O.S. (2024). Contemporary Challenges of E-Learning: Matters Arising From Post COVID-19 Era. *Inter. J. Acad. Res. Educ. Rev.* 12(2): 50-57

## INTRODUCTION

Technology has a way of defining and redefining the way we live, communicate, teach and learn. It cuts across virtually every facet of human endeavour hence the conventional system of learning has to give way to digital learning. Education system needs to be in the forefront of this innovative way of living and doing thing so that learning can migrate from being a physical contact to virtual system. E-learning has long started in advanced nations of the world but in Africa and other developing nations there seemed to some challenges. Students depended on physical learning mode till the emergence of covid-19 lockdown which made physical interactions impossible causing social distancing to prevent being infected with the virus. Covid-19 basically shifted people from physical interactions to digital interactions, meetings had to be held online, the use of zoom and other digital applications became popular to keep teaching and learning going even in the face of the pandemic. The climax of school shutdown occurred in early April 2020, affecting over 1.6 billion pupils in 194 countries (UNESCO, 2020). The Federal Government of Nigeria ordered the closure of all schools in March 2020 as a preventive measure to curtail the transmission. According to Adedigba, (2020), learning activities continued during the COVID-19 lockdown when the Federal Government of Nigeria launched free e-learning portals for all students in primary and secondary schools. The Federal Minister of State for Education also announced that all

students in the country were granted free access to e-learning portals such as schoolgate.ng and mobileclassroom.com.ng. Furthermore, higher institutions of learning also used their institution portals and other platforms such as Google Classroom, YouTube, Google meet, e-mailing and other social media platforms for e-learning curriculum delivery. Some states in the country introduced radio and television learning programme for schools' children (EduCeleb, 2020). The lockdown was eased in October 2020, schools and business organisations started reopening for their commercial activities.

The nations of the world had come out of Covid-19 lockdown but the lesson learnt and the impacts could not be forgotten while some have to be with us for a period of time. People now have choice either to attend meeting physically or online which would not have been possible without e-learning platforms. This was corroborated by Ogba and Owueye (2017) who averred that information and communication technology is changing teaching and learning processes with the development of different technological tools to cater for different categories of learners.

The various level of adoption of COVID-19 e-learning in Nigerian educational institutions made the adoption to be possible hence many schools, colleges, and higher institutions of learning made it mandatory for their teachers to give online lectures during the pandemic. This was paradigm shift in curriculum delivery to learners in many institutions. Both teachers and students were forced to embrace online teaching during this period. The question is, do Ekiti State university lecturers still continuing with online teaching? Do they still maintain the temple? Hence the study examined contemporary challenges of e-learning: matters arising from post covid 19 era.

E-learning is the application of broadband internet and computers to assist teaching and learning. It is a computer based educational tool or system that make learning mobile rather than a static location-based activity. E-learning is mostly delivered online through the internet using a blend of computer-based methods. It offers the ability to share materials in all kinds of formats such as videos, audios, slideshows, word document and pdf among others. E-learning takes place when courses are taught online through learning management systems (LMS), other educational tools, platforms and also includes the development of course materials through content development tools which are digitally transmitted to students. Racheva (2017) submitted that, e-learning has to do with teaching and learning experiences mediated with computers and/or the internet both within and without the confinement of the educational institution. It can also be seen as the process of utilizing gadgets such computer system, internet, zoom and other technological tools/applications in the teaching and learning process (Nwabufo & Nnaji 2021). In an e-learning environment, the teacher and the learners may be far away or very close but they are interconnected by technology and make teaching and learning more convenient and can take place anytime, anywhere provided the people involved have access to enabling tools and the time for the meeting would have been predetermined.

E-learning solutions have been applied as back-up or alternatives to face-to-face classroom learning. It is any kind of teaching and learning done electronically with the aid of mobile phone, personal computer, over an internet platform, audio/video recording of lessons made by an instructor for the consumption of learners/students without physical mode of teaching and learning (Daniel & Abdul, 2022). The world is changing and advancing in technology. Globalization is making institutions not only to compete on national level but also at the global level for global best practices. E-learning in Nigeria was born out of necessities. Private institutions and other nations have adopted e-learning system. There are prospects and challenges in the adoption of e-learning. Some of the students in public institutions might not have android phones, computer system and access to the internet to connect to the e-learning portal. Apart from that, high cost of data subscriptions and poor network might affect the fidelity of the communication process. Digital literacy skills on the other hand might also affect lecturers who do not have digital skills. This could be a big challenge and a limiting factor. The nature of the course being taught might limit adoption of e-learning, most especially the calculation-based courses where the learner might prefer physical class where they could interact with each other and their lecturers and asked questions where necessary.

### **Statement of the Problem**

The global pandemic occasioned by COVID-19 according to World Health Organisation (2023), led to 766,440,796 confirmed cases including 6,932,591 deaths hence declared a pandemic. People were made to work from home and perform their task online, virtual meeting and major events were held virtually including virtual teaching. The question was do the public universities have the capacity to continue with virtual learning in the post COVID 19 Era? Then are they still continuing with e-learning? Are the students ready for e-learning in the Post COVID 19 Era? Do they have the capacity to continue with virtual class? Do they have access to digital equipment and facilities for e-learning? Do they have the funding and the network infrastructure for an effective e-learning experience? These and many questions were to be answered in this study.

## Objectives of the Study

The main objective of this study is to examine contemporary challenges of e-learning: matters arising from post covid 19 era. The specific objectives of the study included the following:

1. What is the e-learning platform used for teaching and learning?
2. Examine the availability of technology equipment for linking up with the e-learning platform
3. establish the benefits the users of e-learning as medium of teaching
4. examine challenges faced in e-learning platforms

## Research questions

1. What are the e-learning platforms adopted by lecturers for instructional delivery?
2. What are the technology equipment available for accessing the e-learning platforms?
3. What are the benefits of using e-learning tools for online teaching?
4. What are the challenges faced in the use of e-learning platform?

## Literature Review

### E-learning platforms adopted by Nigerian institutions

The outbreak of Covid-19 led to significant increase in the adoption and usage of e-learning technology in higher educational institutions across the world. In Nigeria, the Federal government through the Minister of Education directed the heads of Educational Institutions to embrace e-learning platforms for the continuation of education in Nigeria to keep the teaching and learning going in spite of the lockdown (Deji, 2020). Most Nigerian Universities especially private institutions could not continue to keep students idle and had to switch to e-learning mode during the lockdown. Ifijeh, Osinulu, Esse, Adewole-Odeshi and Fagbohun (2015) in a study conducted on Assessing E-Learning Tools in an Academic Environment found that Moodle Learning Management System among other e-learning platforms in the University, multimedia system was the most available e-learning platform in Covenant University, Audio-Video CDs, CD ROMs and Blogs were the least available. Chiaha, Eze, and Ezeudu (2013) in their study revealed the kind of e-learning facilities that students have access to, the percentage and extent to which students access these facilities as well as the factors that hindering them from accessing e-learning facilities. Only 42.9% of the students had access to e-learning facilities while most students have access to only e-mail accounts. The major factors hindering access to e-learning facilities included irregular electric power supply, poor network connection among others. Similarly, Eze, Chinedu-Eze and Bello (2018) investigated utilisation of e-learning facilities in the educational delivery system of Nigeria in Landmark University Omuaran, Kwara State and found that the university had several facilities that were used in delivering lecturers and assessing students. This was an e-learning platform created by the University's Centre for System and Information Services (CSIS) which provided bases for interactions with students by uploading course compacts online. This platform is used to upload quiz and assignments.

Balogun, Adeleke, Abdulrahman, Shehu, and Adedoyin, (2023) stated that university of Ilorin adopted e-learning for teaching and learning during the period of Covid-19 lockdown. According to them, the school had started the use of e-learning system such as the use of email and WhatsApp to submit assignments, the use of online platform for General Studies that involved a very large number of students, and use of online discussion forum such as Google Meet, Zoom, Google Classroom and Microsoft Teams were introduced for lectures and subscription was made for Zoom to allow classes beyond an hour.

### Availability of technology equipment for linking up with E-learning platform

Face-to face or the physical class needs the students to know the timetable and the time allotted for each of the courses, make deliberate effort to walk to the lecture hall and receive lectures. However, in an e-learning environment, students need to connect to the virtual class using electronic devices such computer system, android phone and other handheld mobile devices and Internet connectivity. There are situations where the institution has a learning management system through which virtual lectures are delivered. Students have to login with their details to access the portal, some lecturers make use of some instant messaging app such as what'sApp, telegram, google meet among

others for online real-time lecture. In such environment, the students need to download the app into their phone and computer system before connecting to the virtual class. Olubowale (2018) in his study on availability of ICT facilities for learning of Mathematics in Distance Learning Institute University of Lagos, revealed that internet/web facilities, email, multimedia projectors, computer systems, Public address system, photocopy machines and printers were available. Video conferencing equipment was found not to be available in the institution. There was high extent of accessibility to technology resources by learners in learning of Mathematics in Distance Learning Institute. There was easy access by learners to course content and materials online, logging into LMS to perform different activities online was found to be easy for the learner. Learners also had access to digital library in the institution. Although they did not have access to different delivery methods such as video-taped instruction, e-mail delivery and web conference for learning mathematics course. They did not also have access to printers and photocopying machines.

### **Benefits of Using E-Learning Tools for Online Teaching**

E-learning platforms adopted for teaching and learning processes during COVID-19 lockdown was one of the best things that happened to education system in Nigeria. It was a paradigm shift in learning. Teaching and learning used to be face-to-face basically and virtual lecture was at the infancy stage in pre COVID-19 era. Adoption during COVID-19 was a matter of survival because there was no other means of interacting with students and having lectures during the time. Though face-to-face teaching and learning system has come to stay, e-learning platforms can be used to compliment it and there were benefits inherent in both. Al Rawashdeh, Mohammed, Al Arab, Alara, Al-Rawashdeh and Al-Rawashdeh (2021). Identified the following as the benefits of e-learning, greater involvement of students due to features of e-learning management system such as texts, videos, sounds, collaborative sharing and interactive graphics. ii. Flexibility, it enhances rate of assimilation, collaborations between the lecturers and students. iii. It promotes centralized learning, easy upgrading, simplified learning process and low cost (Muruthy & Yamin, 2017). Anekwe, (2017) identified Cost effectiveness, saves time, smart digitalised system as some of the benefits too.

### **Challenges faced in the use of e-learning platforms**

The challenges of e-learning are numerous that only students who have the required facilities together with data on their devices can connect to the virtual class. Affordability of learning equipment (smart phone). Not all students have and can afford Smartphone because some parents are still struggling to fund children's education and may not be able to provide Smartphone for them. Inadequate technical know-how of the use of digital tools for e-learning by some of the lecturers and students. The inadequacy of Nigeria's weak and underdeveloped broadband infrastructure is a significant shortcoming (Trucano, 2014). For Mohamedbhai (2014), inequalities could be one major problem of distance e-learning because of the differences existing between urban and rural students and the rich and the poor who could not afford the cost of internet (Ajadi, Salawu & Adeoye, 2008), the problem of bandwidth and diversion using the University of Abuja, Nigeria as case point. Anene, Imam and Odumuh (2014) studied the problems and prospects of e-learning in Nigerian Universities by specifically examining availability of facilities for e-learning and e-learning materials and to ascertain if students make use of e-learning in their studies. They found that one of the obstacles to the use of technology was infrastructure deficiencies. The students lamented that Nigerian Universities do not have adequate e-learning library domain, online seminars or discussion with lecturers, online examination and limited bandwidth. Aboderin (2015) found in his study that inadequate computer system, poor internet facilities, students' lack of access to e-learning facilities and tools, high cost of software and epileptic power supply were challenges inhibiting the use of e-learning among students of National Open University of Nigeria.

### **METHODOLOGY**

The study adopted a descriptive survey research design. The study was carried out among the students of Ekiti State University because the University encouraged teaching staff to make use of online in lecture delivery when it became impracticable to have face-face (physical) lecture. The population of this study was all the students across the faculties in Ekiti State University. The sample consisted of 355 respondents. The instrument comprised five sections. Section A was to seek personal information from the respondents. Section B was designed to elicit information on the E-learning platform adopted by the lecturers in Ekiti State University; Section C was to elicit information on the availability of ICT equipment for attending online classes; Section D was on the Benefits of using e-learning tools for online teaching and Section E Challenges of using e-learning tools for online lectures. The instrument was administered through online data collection platform specifically google form. Data collected were analysed using simple frequency and percentages.

## DATA ANALYSIS

### Demographic variable of the respondents

**Table 1:** Gender distribution of the respondents

Gender	Frequency	Percentage %
Male	135	38
Female	220	62
Total	355	100

**Source: Field work 2024**

Table1 revealed that 135(38%) of the respondents were male while 220(62%) were female

**Table 2:** Level of the Respondents

LEVEL	FREQUENCY	PERCENTAGE %
100	70	19.7
200	215	60.6
300	NIL	NIL
400	60	16.9
500	NIL	NIL
Masters	5	1.4
PhD	5	1.4
Total	355	100

**Source: Field work 2024**

Table 2 which has to do with the academic level of the respondents revealed that, 70(19.7%) were in 100 level, 215((60.6%) were in 200 level, 60(16.9%) of the respondents were in 400 level while 5(1,4%) of the respondents were masters and PhD students respectively. However, 300 and 500 level students did not participate in the study.

**Research question one:** What are the e-learning Platforms adopted by your lecturer?

**Table 3:** E-learning platform adopted

ITEM	Frequency	Percentage %
Telegram	275	77.5
What's App	100	28.2
Learning Management System (EKSU portal)	80	22.5
Zoom	35	9.9
Google meet	30	8.5
Microsoft Team	20	5.6
Google classroom	20	5.6

**Source: Field work 2024**

Table 3 revealed that(77.5%) of the respondents indicate that their lecturers adopted the use of Telegram for on-line teaching followed by WhatsApp(28,2%) followed by LMS(EKSU) portal (22.5%), zoom (9.9%)Google meet (8.5%) while Microsoft Team and Google classroom were the least adopted with (5,6%) respectively.

**Research Question Two:** What are the ICT facilities availability for E-Learning?

**Table 4:** Availability of ICT facilities for E-Learning

ICT EQUIPMENT	Frequency	Percentage %
Smart Phone	270	76.1
Computer System	110	31
Free wifi	95	26.8
Affordable Mobile data subscription	70	19.7
Tablet	15	4.2

**Source: Field work 2024**

Table 4 revealed that (76.1%) smart phone was the most available ICT equipment for e-learning, followed by computer system (31%), free wifi (26.8%), affordable mobile data subscription (19.7%) while tablet (4.2%) was the least available ICT equipment for e-learning.

**Research Question Three:** What are the prospects of using e-learning tools for online-teaching?

**Table 5:** Prospects of Using E-learning Tools for Online-Teaching

ITEMS	Frequency	Percentage %
It enhances collaboration between lecturers and students	185	52.1
Greater involvement and interaction of students and lecturers	175	49.3
It simplifies and motivates learning process	130	36.6
It makes learning flexible	100	28.2
It saves time	100	28.2
No barriers to teaching	85	23.9
It is cost effective	55	15.5
It encourages personalised teaching	10	2.8

**Source: Field work 2024**

Table 5 revealed that collaboration between lecturers and students (52.1%) was the most beneficial in using e-learning tools followed by greater involvement of students (49.3%), it simplifies learning process (36.6%), flexibility and it time saving (28.2%) respectively, no barrier to teaching and learning (23.9%), cost effectiveness (15.5%) while personalised teaching and learning process was the least benefit of using e-learning tools.

**Research Question Four:** What are the challenging of online teaching and learning in Post COVID 19 Era?

**Table 6:** Challenges of Online Teaching and Learning

ITEMS	Frequency	Percentage %
Poor network	225	63.4
Lack of access to e-learning tools	125	35.2
Irregular Power	120	33.8
Prone to distraction	115	32.4
Cost of ICT Equipment	90	24.4
Deficiency in important feature in the ICT equipment used in learning	60	16.9
Low bandwidth	55	15.5

**Source: Field work 2024**

Table 6 revealed that (63.4%) poor network was the major challenge of online teaching and learning followed by lack of access to e-learning tools (35.2%), followed by irregular power (33.8%), prone to distraction (32.4%), followed by cost of ICT equipment (24.4%), deficiency of important feature in the ICT equipment used in learning (16.9%) while low bandwidth was the least challenges of online teaching and learning.

## Discussion of the findings

The study revealed that Telegram was the most prominent e-learning platform used for on-line teaching followed by WhatsApp, LMS(EKSU) portal, zoom, Google meet, while Microsoft Team and Google classroom were the least adopted online platform. The finding of this study was at variance with the earlier study of Ifijeh, Osinulu, Esse, Adewole-Odeshi and Fagbohun (2015) conducted among undergraduates in covenant University, Ogun-State, Nigeria where Moodle Learning Management System was mostly used for e-learning while Audio-Video CDs, CD ROMs and Blogs were used in Covenant University. To compliment it but Ekiti State University Telegram ranked as the most widely used although LMS which is on the EKSU portal was also being used for e-learning. Unlike University of Ilorin which is very innovative and had adopted the use of E-learning before COVID-19 lockdown. Balogun, Adeleke, Abdulrahman, Shehu, and Adedoyin, (2023) averred that University of Ilorin adopted e-learning for teaching and learning before and after the period of Covid-19 lockdown. According to them, the school had started the use of e-learning system such as the use of email and WhatsApp to submit assignments, the use of online platform for General Studies that involved a very large number of students. The use of online discussion forum such as Google Meet, Zoom, Google Classroom and Microsoft Teams were introduced for lectures and subscription was made for Zoom to allow classes beyond an hour.

The findings further revealed that smart phone was the most available technology equipment for e-learning, followed by computer system, free wifi, affordable mobile data subscription while tablet was the least available technology equipment for e-learning. According to Statista, in 2023, the current number of smartphone users in the world today is 6.93 billion, meaning 85.68% of the world's population owns a smartphone, this may account for the success of e-learning as technology is part of undergraduate daily life and most of them spend good number of hours daily interacting with their mobile phones. Engaging them online was one of the important ways of attracting their attention and engage them profitable rather than allowing them to waste their time on irrelevances. The students were always with their mobile phones, employing this e-learning tool was more or else meeting them where they were, guiding them to do what they liked to do most. Students were found to always be online, therefore migrating their learning online was an innovative way of getting them more interested in learning.

The findings on the prospects of e-learning revealed that e-learning tools enhanced interactions and collaboration between lecturers and students, greater involvement of students was also observed and simplified learning process, made learning flexible, saved time and removed barriers to teaching. It was cost effective and personalised teaching and learning process. The finding of this study corroborated the earlier study of Al Rawashdeh, et al., (2021) who identified the greater involvement of students due to features of e-learning management system such as texts, videos, sounds, collaborative sharing, and interactive graphics. It was also in agreement with Anekwe, (2017) who identified Cost effectiveness, time saving, smart digitalised system and increased rate of assimilation as part of e-learning benefits.

The study found that poor network was major setback of online teaching and learning followed by lack of access to e-learning tools, irregular power supply, distraction, followed by cost of technology equipment, deficiency of in the technology equipment used in learning while low bandwidth was the least challenge of online teaching and learning. The finding corroborated the position of Trucano (2014) that the inadequacy of Nigeria's weak and underdeveloped broadband infrastructure was a significant shortcoming of e-learning which was the root cause of poor connectivity, inability to hear the lecturer and disconnections being experienced by students during lectures. Anene, Imam and Odumuh (2014) in supporting this view submitted that one of the obstacles to the use of technology was infrastructure deficiencies.

In conclusion Ekiti state university still has a long way to go in teaching with e-learning platforms. The university is still deficient on what will make e-learning to be effectively used by both lecturers and students. The students lamented that universities do not have adequate e-learning library domain. Online seminars or discussion with lecturers, online examination and limited bandwidth also posed some challenges. It was therefore recommended that to overcome these challenges all the major stake holders had to come in term with the fact that e-learning has come to stay hence there should be a massive investment in e-learning infrastructure to make it readily available and accessible to both students and lecturers to complement physical lectures. There should be adequate funding to equip the University e-library, procure relevant equipment, infrastructure and trainings for both lecturers and students.

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