

Full Length Research Paper

Distance learning (e-learning) in Obafemi Awolowo University during Covid-19 pandemic school lock-down in Nigeria: The prospects and challenges

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The advent of Covid-19 pandemic compelled the Nigerian education system, especially the university system that relied mostly on face-to-face instruction method, to migrate to distance learning through e-learning method. In order to mitigate the effects of the pandemic, the educational sector appears to be leaning toward e-learning globally. However, the adoption of this method in Obafemi Awolowo University (OAU) during the pandemic had prospects and challenges. Both primary and secondary data were used for this study. The primary data were gathered through the use of questionnaire, while content analysis was used for the secondary data. The study revealed some challenges of e-learning in OAU during the pandemic: poor internet connection, high cost of data charges, unstable electricity supply and others. Furthermore, the study identified some prospects of e-learning in OAU. Hence, the study concludes that the present world pandemic had made the educational sector to look inward in order to achieve a sustainable university education even in post COVID-19 era.

Key words: COVID-19, distance learning, e-learning, pandemic, university education.

INTRODUCTION

The advent of covid-19 pandemic has brought about a paradigm shift in the learning process and procedure in the world over, in Africa, particularly Nigeria. In December 2019, COVID-19, a novel illness, was identified as the causal agent in a reported instance of pneumonia patients admitted to hospitals in Wuhan, China (Munster et al., 2020). This disease is transferred by zoonotic droplets in the air, and people can become infected by coming into close contact with the cough and sneeze of people who are infected with the virus (Kumar et al., 2020). In March 12, 2020, the World Health

Organization (WHO) officially declared COVID-19, also known as corona virus, a pandemic (WHO, 2020). Countries of the world engaged in various measures to implement physical distance in an effort to reduce the spread of the pandemic. The measures included closure of boarders, social gathering, worship centres including educational institutions and all other sectors which can aid the spread of the disease (Nicola et al., 2020; UNESCO, 2020).

Most educational institutions around the world were shuttered as a result of the outbreak. According to

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UNESCO data, the peak of school closures occurred in early April 2020, affecting over 1.6 billion pupils in 194 countries (UNESCO, 2020). Nigeria's Federal Ministry of Education ordered the closure of all schools in March 2020, and reopened them in October 2020. This reopening of school brought about the option of distance learning through the e-learning system that is, utilizing the distance learning method from different individual locations. This was in line with the directive of the government of avoiding large gathering of people. In an effort to reduce the effect of school closure, school administrators, government and concerned stakeholders also developed strategies during the lock-down to ensure that learning continued. Some Nigerian universities, particularly those that are privately owned, quickly transitioned from traditional face-to-face instruction to online learning. As the period of total lockdown extended, more universities quickly switched to online teaching also known as electronic learning (e-learning). Anaeke and Anaeke (2020) observed that in the event of pandemic such as Covid-19, e-learning is seen as the only alternative to keep the educational system running.

Educational institutions did not prepare for any discontinuity that could affect the educational sector; however, institution management was able to provide modalities to ensure continuity of learning. This was largely achievable due to the fact that the school lockdown occurred during a period when digitalization in the educational sector was readily but not fully available. Academic staffs in OAU as in other institutions were given an intensive two weeks virtual training irrespective of their status, on how to use distance learning tools provided. So they had to swiftly adjust to the new teaching technique. Lecturers and students struggled to adjust to online classes while maintaining a minimum level of communication to aid learning and development. It was challenging transiting to distance learning in a short amount of time, especially in a developing country like Nigeria where advanced technology has not been well integrated into the educational system Obododike and Okekosisi (2020).

Most universities involved in online teaching provided students with learning materials and pre-recorded lecture videos. Remote teaching was done through e-learning management systems such as Google Classroom, Google meet, Zoom, and Microsoft Teams. Course materials and pre-recorded lectures were also sent to the students' emails, uploaded to learning software and sometimes sent to student's Whatsapp groups. Lack of technical know-how and resources to adapt to the new learning method put the students among all strata that is; primary, secondary and tertiary institutions behind to adapt to the new method. Furthermore, university students who may have the ability to engage in internet-based learning encounter a shortage of regular electrical sources as well as weak internet infrastructure (Crawford et al., 2020). In addition to these setbacks, students and

institutions with poor technology and resources, limited access to internet coupled with students' inability to adapt to online learning undermined the government's effort (Zhong, 2020). However, it is important to state that, aside the fact that the knowledge of e-learning would enhance the efficiency of knowledge of both lecturers and students, it would also put an end to discontinuity in education that emerged as a result of covid-19 pandemic lockdown. Okure (2018) observed that the e-learning system is not oddity; it has been used by some educational institutions all over the world and also some institutions in Nigeria. Some are using it to promote distance education (DE) and long life learning, and the term e-learning is the integration of learning with technology to advance knowledge. In view of the foregoing, this paper intends to look at the prospect and challenges of distance learning (e-learning) in OAU during Covid-19 pandemic school lock-down.

CONCEPTUAL CLARIFICATION

University education

The word *university*, according to Verger (1992), is derived from the Latin word *universitas* which means "the totality" or the "whole." In the medieval times, *universitas* was a general term used to denote all kinds of communities or corporates such as guild, a trade, a brotherhood, and so on. Alemu (2018) asserts that university is a source of universal knowledge with highly skilled human power for the professions. The general mission of any university is to provide highly skilled human resource to all strata of the society through divers training and research.

Allen (1988) defines university as an institution with power to award academic degrees and preeminent in the field of research. Alemu (2018) also observes that university education represents both a higher learning institution and a community of scholars or persons. A university education is a higher learning institution that brings men and women to a high level of intellectual development in the arts and science, and in the traditional professional disciplines, and promotes high-level research. Moreso, university education is to proffer solutions to societal problems through teaching and research. In the words of Clark (2001), the university education has become "multiversity" that has multiple purposes which perform multiple functions and constitute multiple people from inside and outside the academia. Otonko (2012) submits that a good university education system among its function is to help boost the transformation of societies into knowledge societies. This it does by providing not just educated workers, but knowledgeable individuals that will be relevant to their individual life and contribute immensely to the growth of the economy in general. University is also seen as a

universal city where societies thrive through innovation teaching, research and community service especially, in this era of information and communication technologies (ICT) when the whole world has become a global village through internet and online transactions.

E-learning

The term e-learning has a different meaning for practically everyone who utilizes it. The phrase has been used to describe content that has been packaged using technical infrastructure. Almost everyone agrees that e-learning is critical to the future of education and should be widely utilized. Parks (2013) posits that the word “e” should refer to “everything, everyone, engaging and easy” in addition to electronic”. E-learning is the use of Information and Communication Technology (ICT) to support and enhance learning process and teaching. Eze et al. (2018) claim that e-learning is concerned with the holistic incorporation of modern telecommunication equipment and ICT resources into the educational system.

The term e-learning refers to an electronic technique of learning that involves computerized learning in an interactive interface that is convenient for both students and teachers/lecturers. E-learning is also a term that refers to educational technologies. Better material delivery, interactivity, quality content delivery, and learners’ and lecturers’ confidence are all advantages of e-learning in the educational sector. Despite the advantages of the e-learning system, in Nigeria, it is rightly observed that e-learning is at its early adoption and infancy stage.

Distance learning

The term, distance learning is also known as distance education, e-learning, and online learning. It is a type of education in which teachers and students are physically separated during instruction and various technologies are used to allow student-teacher and student-student communication. Connick (2000) claims that distance learning takes place when the instructor and students are not in the same room but separated by physical distance. Non-conventional students, such as full-time workers, military people, and non-residents or those in remote areas who are unable to attend classroom lectures, have long been the emphasis of distance learning. Distance learning has established itself as an important component of the educational landscape, with current trends indicating that it will continue to develop. Simonson (2003) defined distance learning as “institutional-based, formal education where the learning group is separated, and where interactive telecommunications systems are used to connect learners, resources, and instructors”.

Newby et al. (2000) also define distance learning as “an organized instructional program in which the teacher and learners are physically separated. In a simple term, distance learning uses the electronic means to integrate knowledge. Recently, attention has been drawn to this concept as it makes learning easy and usable in cases of emergency such as pandemic or unrest.

Features of distance learning

The phenomena of distant learning have been referred to by a variety of terms. Distance education is defined as the combination of distance learning (students’ activity) and distance teaching (teachers’ activity). Distance learning is distinguished by four features. To begin with, distant learning is always conducted through institutions; it is not self-study or a non-academic setting. The schools may or may not provide traditional classroom-based training, but they are eligible for accreditation through the same authorities.

Secondly, distance learning necessitates geographic separation, and time may also divide students and lecturers. This form of teaching has many advantages, including accessibility and convenience. Students’ intellectual, cultural, and social disparities can also be bridged through well-designed programs.

Also, interactive telecommunications establish communication between members of a learning group and the teacher. Electronic communications, such as e-mail, are most frequently employed, but older forms of communication, such as the postal system, may also be used. Interaction is crucial to remote education, as it is to any education, regardless of the medium. As communications methods become more sophisticated and widely available, learners, teachers, and instructional resources become less reliant on physical proximity. As a result, the Internet, mobile phones, and e-mail have contributed to the rapid expansion of distant learning.

Finally, distance education, like any other type of education, creates a learning community made up of students, a teacher, and instructional resources that is, books, audio, video, and graphic displays that allow students to access the materials of instruction. The concept of community building is promoted by social networking on the Internet. In a remote learning situation, this type of networking can help students connect with one another and therefore feel less alone.

Similarities and differences between distance learning and e-learning

Having examined the two concepts, it is noticed that both concepts are used interchangeably. However, there are differences between the two. Firstly, e-learning is a style of learning while distance learning is a method of attending class without physically being present through

online means. Distance teaching gives learners the opportunity not to be part of the class room setting while e-learning can be used to compliment face to face teaching. E-learning makes learning more interactive; however, distance learning offers learners the chance to take classes wherever they are. Simply put, the main difference between distance learning and e-learning is location; while the e-learning system students can be together in the classroom going through their digital lessons and various assessments, distance learning, on the other hand, can be done from the students' home.

Covid-19

The word COVID-19 is derived from the statement Corona Virus Diseases of the year 2019. The phrase "CO" is from Corona, "VI" from Virus, and letter "D" from Disease, and "19" from the year 2019 (Odewale et al., 2020). It is a pandemic that broke out in the city of Wuhan, China in December 2019. Coronaviruses belong to the Coronaviridae family in the Nidovirales order. According to Muhammad and Abeer (2020), the coronavirus was named for the crown-like spikes on the virus's outer surface. Coronaviruses are small (65–125 nm in diameter) and contain a single-stranded RNA nucleic material with a length of 26–32 kbs. Wuhan, China's emerging commercial hub, recently saw an outbreak of a novel coronavirus that killed over eighteen hundred people and infected over seventy thousand in the first fifty days of the pandemic. The Nigerian Centres for Disease Control and Prevention (NCDC) began monitoring an outbreak of a novel coronavirus, SARS-CoV-2, which produced COVID-19, a respiratory ailment. Coughing and sneezing, which are basic symptoms without covering the mouth can release a droplet of the virus into the air which exposes anyone who touches the surface to be liable of contacting the virus. Also, touching or shaking hands with an infected individual can transmit the virus between individuals.

Pandemic

The word "Pandemic" comes from the Greek words "pan" and "demos". Pan means "all" while demos mean "the people". The word is usually referred to a widespread of epidemic and contagious disease across a nation or one or more continents at the same time (Honigsbaum, 2009). It is an epidemic affecting a large number of people and occurring over a very wide area, crossing international boundaries. Harris (2000) defines pandemic as an epidemic affecting a large number of people, spreading over borders and boundaries worldwide. Odewale et al. (2020) also observe a consensus among scholars that pandemic is an epidemic that affects a large number of people in a large geographical area. Pandemic has some characteristics which provide an in-depth understanding of the concept, among them are; wide

geographical extension, novelty, severity, infectious and contagious in nature. Pandemic has a wide geographical spread because of its ability to extend to large geographical areas. Qiu et al. (2017) observe that the term, pandemic is usually referred to diseases that extend over large geographic areas, for instance, the Black Death of 14th century, influenza, cholera, HIV/AIDS among others. Pandemic is novelty in nature because it always comes with the newness and at least associated with novel variants of existing organisms. The respiratory viruses such as SARS, influenza and enteric organisms, such as cholera have the potential of spreading wide beyond human expectation. The severity nature of pandemic is circled in the fatality ratio of the disease. Pandemics are also characterized by high rates of attack and by explosive spread with almost population immunity. Examples are influenza H1N1 or Ebola. Also, pandemic diseases are highly infectious and contagious in nature and they can be transmitted from one person to another. The transmission can be direct or indirect. The direct form is from person to person while the indirect form is from person to vector and from vector to person (Morens et al., 2009).

METHODOLOGY

The survey research design was used for this study. Both primary and secondary data were used. The primary data were gathered through questionnaire method while the secondary data were sourced through the use of content analysis of relevant documents. The population consisted of staffs and students of OAU. The sample consisted of 100 respondents from 13 faculties in OAU including, faculty of Administration 18 (18.0%), 7 (7%) from Arts, 6 (6%) Technology, 10 (10%) Science, 5 (5%) Environment design and management, 11(11%) Social sciences, 10(10%) Agricultural science, 9 (9%) Pharmacy, 17 (17%) Education, 5 (5%) Law and 2 (2%) Basic Medical Science. This depicts that the respondents are reliably conversant with the operations of e-learning of the study area. The questionnaires, a total of one hundred (100) copies, were outlined with items to elicit information on challenges and prospects confronting e-learning in OAU during COVID-19 pandemic. All respondents agreed to have used the Google classroom which was officially introduced by the school management; while 75% used Google meet for virtual learning and 68, 43 and 11% used Zoom, Whatsapp and Telegram respectively. This therefore makes the findings of this research to be insightful, detailed and decisive. Experts in the Department of Local Government and Development Studies and Public Administration were sought to ascertain the face and content validity of the instruments. Data collected were analysed using descriptive and inferential statistic including percentages, frequency and means.

FINDINGS

Distance learning (e-learning) in Obafemi Awolowo University during Covid-19 pandemic school lock-down

This part of the study presented the data analysis of the

Table 1. The challenges of distance learning in Obafemi Awolowo University during covid-19 pandemic.

S/N	Assertion	Strongly agree	Agree	Neutral	Strongly disagree	Disagree	No response	Descriptive statistics	
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	Mean value	Standard deviation
i.	Internet connection problems hinder effective learning during the course of e-learning	63 (63.0)	36 (36.0)	1 (1.0)	0 (0.0)	0 (0.0)	- (--)	4.62	0.508
ii.	High cost of data service is a disadvantage of e-learning	61 (61.0)	37 (37.0)	1 (1.0)	0 (0.0)	1 (1.0)	- (--)	4.57	0.624
iii.	Unable to absorb all knowledge, skills and difficulties to concentrate in home schooling.	33 (33.0)	50 (50.0)	11 (11.0)	3 (3.0)	3 (3.0)	- (--)	4.07	0.913
iv.	Electricity is a major constraint during the course of e-learning.	63 (63.0)	35 (35.0)	1 (1.0)	0 (0.0)	1 (1.0)	- (--)	4.59	0.621
v.	E-learning decreases practical skills and may hinder productivity in future	14 (14.0)	51 (51.0)	19 (19.0)	7 (7.0)	9 (9.0)	- (--)	3.54	1.105
vi.	Inadequate knowledge and technical know-how of learning tools is a great challenge faced by students and lecturer during the course of e-learning	34 (34.0)	51 (51.0)	9 (9.0)	0 (0.0)	6 (6.0)	- (--)	4.07	0.987
vii.	Limited students-lecturer interaction	37 (37.0)	49 (49.0)	9 (9.0)	1 (1.0)	3 (3.0)	1 (1.0)	4.13	0.960
Viii.	E-learning is Difficult to use in complex concepts.	28 (28.0)	31 (31.0)	22 (22.0)	4 (4.0)	14 (14.0)	1 (1.0)	3.52	1.367
ix.	Adequate assistance was provided by the ICT department to resolve technical challenges	6 (6.0)	22 (22.0)	31 (31.0)	13 (13.0)	28 (28.0)	- (--)	2.65	1.266

Field survey, 2021.

challenges and prospects applicable to using distance learning as a platform for continuing learning in the Obafemi Awolowo University Ile Ife Nigeria. Six (6) assertions were carefully set out for the respondents to examine this. Tables 1 and 2 revealed the frequency and percentage distribution of respondents as well as the mean score and standard deviation of each of the assertions. Its values/responses were organized using likert scale of measurements, such as: Strongly Agree (5) Agree (4), Neutral (3), Strongly Disagree (2) and Disagree (1). In addition, the mean value (\bar{X}) summarizes the strength of the respondents for each of the statements, using a decision rule as thus: where ($\bar{X} < 3.5$), more respondents tended towards disagreement; and where ($\bar{X} > 3.5$), more respondents tended towards agreement.

Challenges

As shown in Table 1, the problem of internet connection hinders effective learning during the course of e-learning in the study area. The respondents were asked to react on the extent to which they agreed that the problem of internet connection hindered effective learning during the course of e-learning. In their reactions, 63 representing 63.0% of the respondents strongly agreed with the assertion; with a complementary trend of 36 (36.0%) of the respondents agreeing. While only 1 (1%) respondent was neutral about this assertion. The mean value and standard deviation ($\bar{X} = 4.62$, $SD = 0.508$) confirmed this frequency distribution. The interpretation of this distribution is that problem of internet connection hindered effective learning during the course of e-

learning and was also a significant challenge of e-learning, as no respondent disagreed with this assertion.

The cost effectiveness of data used to run the e-learning is noticeable. In the respondents' reactions, 1 (1.0%) of the respondents disagreed; while 61 (61.0%) of the respondents and 37 representing 37.0% of the respondents strongly agreed and agreed respectively that high cost of data service is a disadvantage of e-learning. This data distribution shows that a reasonable number of the respondents appear to have been in agreement with the assertion that the use the e-learning platform relies heavily on data usage; so the high cost of data poses a threat, as verified by the mean value and standard deviation ($\bar{X} = 4.57$, $SD = 0.624$).

On the other hand, it was reported that 33

Table 2. The opportunities applicable to using of e-learning as a platform for continuing learning.

S/N	Assertions	Strongly agree	Agree	Neutral	Strongly disagree	Disagree	No response	Descriptive statistics	
		F (%)	F (%)	F (%)	F (%)	F (%)	F (%)	Mean value	Standard deviation
i.	The knowledge of e-learning will expose both the lecturers and students to the reality of the world outside the classroom since the world is a global web	57(57.0)	42 (42.0)	1 (1.0)	0 (0.0)	0 (0.0)	- (--)	4.56	0.519
ii.	The e-learning system will reduce the issues of insufficient classrooms and clashes in time table.	34 (34.0)	49 (49.0)	6 (6.0)	6 (6.0)	5 (5.0)	- (--)	4.01	1.049
iii.	E-learning is cost effective as it reduces transportation cost and time.	26 (26.0)	37 (37.0)	17 (17.0)	12 (12.0)	8 (8.0)	- (--)	3.61	1.222
iv.	E-learning will enhance the efficiency of knowledge as both students and lecturers will have easy access to large amount of information.	28 (28.0)	58 (58.0)	10 (10.0)	1 (1.0)	3 (3.0)	- (--)	4.07	0.832
v.	E-learning is the only method that will put an end to discontinuity in education that emerged as a result of COVID-19 pandemic lockdown.	22 (22.0)	48 (48.0)	12 (12.0)	7 (7.0)	11 (11.0)	- (--)	3.63	1.220
Vi	Essential ICT skills were gained during the course of e-learning.	28 (28.0)	50 (50.0)	13 (13.0)	4 (4.0)	5 (5.0)	- (--)	3.92	1.012
Vii	Before covid-19, there is Limited previous experience with use of e-learning.	38 (38.0)	53(53.0)	3 (3.0)	3 (3.0)	3 (3.0)	- (-)	4.20	0.876

Field survey, 2021.

(33.0%) of the respondents agreed they were unable to absorb all knowledge, skills and had difficulties concentrating in home schooling with a strong agreement; while 50 representing 50% of the total respondents only agreed with the assertion. However, 3 (3.0%) of the respondents strongly disagreed with the position and also 3 (3.0%) of the respondents are believed to have disagreed with the position. A sizeable amount of the respondents 11 (11.0%) did not take any position on this assertion. This implies that there is high risk of ability to absorb all knowledge, skills and problem of concentration in the use of e-learning, since the mean value (4.07) is beyond the mid-point of 3.5. This is confirmed with the mean value and standard deviation ($\bar{x} = 4.07$, $SD = 0.914$) above.

As depicted in Table 1, the respondents were inquired whether electricity is a major constraint during the course of e-learning. In their reaction, 63 representing 63.0% of the respondents strongly

agreed and 35 (35.0%) of the respondents agreed with this position. However; 1 (1.0%) of the respondents disagreed with the assertion that eelectricity is a major constraint during the course of e-learning. Unlike the other respondents, 1 representing 1.0% of the respondents took a neutral position on this assertion. This rather implies that electricity is mostly observed as an actionable determinant of effective mode of operation of the e-learning system, as verified by the mean value and standard deviation ($\bar{x} = 4.59$, $SD = 0.621$).In addition, it was reported that 14 (14.0%) of the respondents rated the assertion that e-learning decreases practical skills and may hinder productivity in future in the study area with a strong agreement; while 51 representing 51.0% of the respondents only agreed with the assertion. However, 7 (7.0%) of the respondents strongly disagreed with the position that e-learning will not decrease practical skills and may not hinder productivity in future and 9 (9.0%) of the

respondents are believed to have disagreed with the position. A sizeable amount of the respondents 19 (19.0%) did not take any position on this assertion. This implies relying on the respondents' responses that e-learning will decrease practical skills and hinder productivity in future. This is because there is limitation to practical skills with the use of e-learning since learning is virtual and there is limited interaction during practical classes. The mean value (3.54) confirmed this as it is beyond the mid-point of 3.5. This confirms that practical skills and productivity will be hindered with continuation of e-learning, considering the mean value and standard deviation ($\bar{x} = 3.54$, $SD = 1.105$).

Talking about operation and setting up the e-learning tools, the respondents were examined whether inadequate knowledge and technical know-how of learning tools pose a challenge to students and lecturer during the course of e-learning. Analysing their responses, 34 (34.0%)

strongly agreed that there was a challenge on adequate knowledge and technical know-how of learning tools, 51 representing 51.0% also agreed to this assertion; while 6 respondents believe that the operation of some of the learning tools should not be a challenge on the ground that some are familiar in use. However, going by the stated decision rule of 3.5 mean values, it is confirmed that inadequate knowledge and technical know-how of learning tools pose a challenge to students and lecturers during the course of e-learning. This is reflected with the mean value of 4.07.

In addition, respondents were asked to assess whether e-learning will limit student-lecturer interaction. In their reactions, 37 (37.0%) of the respondents strongly agreed and 49 (49.0%) agreed that e-learning will limit student-lecturer interaction. However, 1 (1.0%) and 3 (3.0%) of the respondents strongly disagreed and disagreed respectively with this particular assertion. This implies that the students-lecturer relationship will be limited because of the use of e-learning, as shown by the mean value and standard deviation ($\bar{x} = 4.13$, $SD = 0.960$); 9 respondents were undecided in this assertion.

On the eight items in the section which seek to assess whether e-learning is difficult to use in complex concepts, in their individual view, 14 (14.0%) disagreed while 4 (4.0%) respondents strongly disagreed. However 28 (28.0%) strongly agreed that e-learning is difficult to use in complex concepts such as diagram with labels and 31% agreed. 22 respondents were neutral to this claim. This implies that respondents in this study area agreed that e-learning is difficult to use in complex concept as shown by the mean value and standard deviation ($\bar{x} = 3.52$, $SD = 1.367$).

On the last note, responding to technical issues, respondents were asked whether adequate assistance was provided by the ICT department to resolve technical challenges. In their different reactions to the assertion, 6 (6.0%) of the respondents strongly agreed with this assertion and 22 representing 22.0% of the respondents agreed with this assertion. However, 13 representing 13.0% of the respondents strongly disagreed with this claim that adequate assistance was provided by the ICT department to resolve technical challenges; while 28 (28.0%) of the respondents disagreed with the claim and 31 (31.0%) of the respondents were believed to have maintained a neutral ground on this assertion. This result showed a remarkable disagreement level with the assertion. This confirms that little assistance was provided by the ICT department. Observation shows that information was provided through the school portal which some still found not informative enough to resolve issues, considering the mean value and standard deviation ($\bar{x} = 2.65$, $SD = 1.266$).

Prospect of e-learning

As presented in Table 2, the following distributions were

observed when the respondents were asked whether the knowledge of e-learning will expose both lecturers and students to the reality of the world outside the classroom since the world is a global web. 57 (57.0%) of the respondents strongly agreed with this claim while 42 (42.0%) of the respondents agreed. However, 1 respondent made an undecided decision on this claim. The implication of this distribution is that the knowledge of e-learning will expose both the lecturers and students to the reality of the world outside the classroom as both will be familiar with the use of this system and connect to the global world, as verified by the mean value and standard deviation ($\bar{x} = 4.56$, $SD = 0.519$).

Also 34 (34.0) and 49 (49.0%) of the respondents strongly agreed and agreed, respectively that the e-learning system will completely reduce the issues of insufficient classrooms and clashes in time table. 6 representing 6.0% of the respondents strongly disagreed and 5 (5.0%) disagreed with this assertion; however, another 6 respondents were neutral.

This rather implies that e-learning system will completely reduce the issues of insufficient classrooms and clashes in time table in the school system as lectures will be scheduled at the comfort of the lecturers and students in the study area. This is also verified by the mean value and standard deviation ($\bar{x} = 4.01$, $SD = 1.049$).

On the other hand, it was reported that 12 (12.0%) and 8 (8.0%) of the respondents strongly disagreed and disagreed, respectively on the assumption that e-learning is cost effective as it reduces transportation cost and time in the study area. However, 26 (26.0%) of the respondents strongly agreed with the assumption while 37 representing 37.0% of the respondents agreed with this position that the use of e-learning system is cost effective as it reduces transportation cost and time. This implies that among the opportunities applicable to using e-learning is the reduction in transportation cost and time, since the mean value (3.61) is beyond the mid-point of 3.5. The mean value and standard deviation ($\bar{x} = 3.61$, $SD = 1.222$) confirmed this claim.

As shown in Table 2, the respondents were investigated whether e-learning will enhance the efficiency of knowledge of students and lecturers. The respondents, in reacting to this comment, gave diverse opinions on the assertion. 28 (28.0%) of the respondents and 58 representing 58.0% were observed to have strongly agreed and agreed, respectively with this assertion. While 1 (1.0%) and 3 (3.0%) of the respondents strongly disagreed and disagreed, respectively with the assertion. However, a sizeable amount of 10 representing 10.0% of the respondents took no position on the assumption. By implication, it is concluded that e-learning will enhance the efficiency of knowledge as both students and lecturers will have easy access to a large amount of information. The mean value and standard deviation ($\bar{x} = 4.07$, $SD = 0.832$) also confirmed this claim.

In addition, the respondents were asked to assess whether e-learning is the only way to end the educational gaps that have formed as a result of the COVID-19 pandemic lockdown. In their reactions, 22 (22.0%) of the respondents strongly agreed and 48 (48.0%) agreed that E-learning is the only way to end the educational gaps that have formed as a result of the COVID-19 pandemic lockdown. However, 4 (4.0%) and 5 (5.0%) of the respondents strongly disagreed and disagreed, respectively with this particular assertion. This implies that respondents confirmed this assertion that if physical classes were not be possible then e-learning was the next best alternative to continuity in education as a result of COVID-19 pandemic, as shown by the mean value and standard deviation ($\bar{x} = 3.63$, $SD = 1.220$).

On the last note, the respondents were asked whether e-essential ICT skills as an added advantage were gained during the course of e-learning. In their different reactions to this question, 28 (28.0%) of the respondents strongly agreed with this assertion and 50 representing 50.0% of the respondents agreed with this assertion. However, 4 of the respondents strongly disagreed with this assumption that e-learning provided the students and lecturer within the period of e-learning system with essential ICT skills. 5 (5.0%) of the respondents disagreed with the assumption and 13 (13.0%) of the respondents were believed to have maintained a neutral ground on this assertion. This result showed a remarkable agreement level with the assertion. This confirms that the e-learning system provided the users in the study area with essential ICT skills mostly in the use of the learning tools which some are new to. This is reflected with the mean value and standard deviation ($\bar{x} = 3.92$, $SD = 1.012$).

Positively, it was reported that 38 (38.0%) of the respondents strongly agreed that before covid-19, there was limited experience with use of e-learning, while 53 (53.0%) of the respondents agreed with this assertion. However, 3 (3.0%) of the respondents strongly disagreed that there was limited experience with the use of e-learning before covid-19. 3 (3.0%) disagreed with this position and also 3 representing 3% were undecided. This implies that covid-19 promoted the use of distance learning in Nigeria which other western countries have been using before covid-19. This shows a remarkable agreement as the mean value (4.20) is beyond the mid-point of 3.5. The mean value and standard deviation ($\bar{X} = 4.20$, $SD = 0.876$) confirmed this frequency distribution.

DISCUSSION

The COVID-19 pandemic had an impact on practically every facet of society, including their daily lives. Everyone needed to acclimate to the new normal, which was neither comfortable nor enjoyable. During the COVID-19 lockdown, certain Nigerian higher education institutions were forced to hastily transit from traditional face-to-face teaching to virtual learning.

Results from this study revealed that many students and staffs of the institutions had little or no experience with virtual learning; nonetheless, institutional management was able to quickly educate the staffs on how to use these tools for remote learning. This is in tandem with the opinion of Obododike et al. (2020) that there is a challenge for developing nations like Nigeria to transit to e-learning method in a short period of time of COVID-19 pandemic. One of the challenges of e-learning as noted by both students and lecturers was the problem of internet connection, according to statistical analysis; bad network connection had a detrimental impact on students' satisfaction during virtual learning. As a result, the government and telecommunications businesses must work together to expand network coverage and internet services. In addition to this is unstable power supply. This is observed mostly by students staying off the school campus where power is relatively unstable. The above revelation also affirmed the positions of Crawford et al. (2020) and Zhong (2020) that shortage of regular electrical sources, as well as weak internet infrastructure constituted a major bane confronting the educational sector during the COVID-19 pandemic lockdown. Another challenge noted through the study is limited interactions they had with one another, and this limited engagement had a considerable detrimental impact on students' learning satisfaction. One way to improve on the interaction between students and lecturers is to encourage them to use the discussion boards in their various e-learning tools so as to promote engagement between them and their lectures. Most of the students also claimed that virtual classrooms are ineffective because they are easily distracted as the fidelity of learning is affected by noises. Distractions are inevitable in life, and it is the students' responsibility to manage or avoid them. Students with large families or those taking online classes on their smartphones may be more susceptible to distraction. Most lecturers say it is tough to teach sophisticated scientific ideas or concepts to students online. In order to make complex ideas simpler, lecturers can upload or post a pre-recorded detailed explanation of these concepts for students to swatch before the actual virtual lecture. A high number of students claim that another challenge posed by e-learning is the high cost of data service, in which some claimed that a thousand naira data cannot be sufficient for 3 virtual classes on Zoom or Google meet.

This study also revealed that e-learning has its prospect if well utilized. Among these is that lecturers and students agreed that the knowledge of e-learning exposed both lecturers and students to the reality of the world outside the classroom since the world is a global web as both now have access to large amount of information on the web to study and impart information. It is also observed that the issue of insufficient classroom and clashes in time table will be eradicated with the help of e-learning. This study also observed that e-learning has the potential of putting an end to discontinuity in

education that emerged as a result of COVID-19 pandemic lock-down if well utilized by the concerned stakeholders in the education sector. This is in agreement with Anaekwe and Anaekwe (2020) that observed that in the event of pandemic such as COVID-19, e-learning is seen as the only alternative to keep the educational system running.

Comparing the amount of money spent on transportation and time used, the study observed that e-learning is cost effective as it reduces transportation cost and time. This is because students will no longer have to rush to board a bus to lecture room and save time for other productive activities.

Conclusion

Despite the fact that COVID-19 has come as a disruption in every phase of life particularly the educational sector, it has also brought about the ideal of digitalization of the educational system in Nigeria as the world is moving into the digital phase. As educational sector embraced distance learning as alternative to the face-to-face traditional learning, lapses and gaps have been identified in the Nigerian educational system. The challenges of distance learning in Nigeria cut across irregular power supply, high cost of internet subscription, poor internet access amongst other factors. The applicable prospect associated with the distance learning includes lecturers/learners convenience, exposure and cost benefits. Hence, the efficacy of e-learning platforms that will foster continued learning cannot be ignored. Federal Government of Nigeria and the Ministry of Education are encouraged to see the COVID-19 pandemic lockdown as an opportunity to invest and promote distance learning in Nigerian institutions.

Recommendation

Based on the findings of this study the following recommendations were made:

- 1) Educational institutions should develop contingency strategies and methods for distance learning and remote learning that may be useful for emergency such as war, crisis and pandemic that can lead to shutting down of schools.
- 2) Federal government and the institution's management should be proactive to build on the opportunities distance learning offers educational institutions even post covid-19 and take measure to ameliorate the challenges identified.
- 3) In addition to training of institutions' staff and students on the usage of distance learning management systems for effective teaching and assessment, technical support should be provided for all staff and students to resolve all technical issues.
- 4) For e-learning to be effective in the study area and

beyond, measures such as provision of high-speed internet service and equipment facilities should be made available to students to support easy access and effectiveness of learning.

5) Distance learning management systems should be inculcated with the traditional teaching routine as this would facilitate student-lecturer understanding of this system.

CONFLICTS OF INTERESTS

The authors have not declared any conflicts of interests.

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