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Chapter Fourteen



Virtual Learning for Educational Transformation in Nigeria: Perception of Students of Elizade University, Ilara-Mokin, Ondo State

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Abstract

This study examined virtual learning for educational transformation in Nigeria: The perception of Students in Elizade University, Ilara-Mokin, Ondo State. The objective of the study examined the experience of students that participated in the virtual learning classes during COVID-19. In order to attain this objective, the work identified their experiences and nature of virtual learning delivery during and after the COVID-19 period. The study was anchored on the social cognitive theory and Marshall McLuhan Technological

Determinism theory. The descriptive survey research design was adopted for the study. The population comprised of all students in Elizade University that participated in the virtual learning during 2019/2020 Academic session. Based on the findings, the work revealed that virtual learning adopted by Elizade University helped the institution to maintain uninterrupted academic calendar, however, there were certain challenges that were encountered which include technological issues, internet lagging, technical issues and teachers' hesitancy in integrating ICT. The work recommended that Elizade University management should adopt 60:40 Physical-Virtual learning-based systems so as to outgrow the challenges experienced during the period.

Keywords: *Virtual learning, COVID-19, Education, Transformation.*

Introduction

The virtual learning although existed, especially in the distance learning and open education programmes in some institutions in Nigeria. Since the colonial period, correspondence colleges from United Kingdom have provided intermediate and advanced level training to a number of qualified Nigerians via correspondence courses. Adesile (2023) opines that the virtual learning environment allows students to study a digital-based curriculum taught by instructors that lecture online using video or audio-based platform to teach. This is can happen in a self-paced or a real-time environment.

Distant learning is one of the emerging fields of education, and its potential impact on all education delivery systems has been

greatly accentuated through the growth of Internet-based information technologies, and in particular the World Wide Web (WWW) presenting approaches that focus on opening access to education and training provision, freeing learners from the unavailability of time and space and offering flexible learning opportunities to individuals and groups of learners. UNESCO (2002).

Distance studies in Nigeria started around the 70s at the University of Ibadan and this was followed by correspondence study, part time programmes offered by conventional universities and other schools, continuing education programmes of Adult Education Department of the universities, programmes offered by the NTI, the National Open University of Nigeria and sandwich programmes offered by universities and other institutions but it was not a popular mode of teaching and learning. (Owoeye, 2024).

However, the COVID-19 pandemic which forced the stoppage of in person teaching and learning, compelled institutions and with the approval of the Federal Ministry of Education through an announcement published in *Premium Times* of March 19, 2020 to leverage on the virtual teaching and learning mode across the country with institutions utilising various platforms, ranging from Google meet, Microsoft Teams, Zoom among others. A practice that has hitherto continues.

Elizade University, a private university located in Ilara-Mokin, Ondo State, Nigeria like other universities, complied with the directive of the Federal Ministry of Education and leveraged technological platform(s) for its teaching and learning during and even after the pandemic. It was a new experience for most if not all the students and a large number of teachers who hitherto has generated opinions about experiences in participating in the relatively new teaching and learning mode,

the delivery, preference and challenges. These perspectives have helped and still help in shaping and reshaping the virtual learning mode, to better delivery and educational transformation.

However, these perspectives are unclear in respect of Elizade University, Ilara-Mokin, Ondo State, especially during the COVID-19 and it is imperative to bridge such gap to expand the frontier of knowledge and enhance virtual learning, since observably, it has currently been incorporated into the conventional learning mode in Nigeria, across educational institutions, especially at the tertiary level.

Therefore, this study examines students' perception about the virtual learning mode that emerged as a result of the COVID-19 pandemic.

Objectives of the Study

The general objective of this study looked at virtual learning for education transformation in Nigeria, in achieving this stated general objective the study focused on the following specific objectives:

The study has the following objectives:

- i. To examine the experience of students that participated in the virtual learning classes during COVID-19.
- ii. To find out how learning was delivered during the virtual learning period.
- iii. To determine the students' preference of virtual learning to classroom learning.
- iv. To identify challenges of the virtual learning during COVID-19.

Literature Review

Virtual learning is an environment that allows students to study a digital-based curriculum taught by instructors that lecture online using video or audio-based platform to teach. This can happen in a self-paced or a real-time environment.

Virtual learning could be seen in different forms which are: e-learning, internet learning, online learning and computer-based learning. This type of learning gives access to course work from anywhere, at any time, making learning super convenient. In a self-paced or real-time environment, virtual learning gives access to course work to be accessed and submitted at anywhere or anytime (Salawudeen, 2010).

In to these advantages, the nature of virtual learning allows teachers to conduct more frequent assessment to help ensure students are staying on track. Personal computers and the Internet have revolutionized entire sectors of society. Facebook, Twitter, YouTube, Skype and other online communications media have allowed billions of people around the world, Nigeria inclusive to share ideas in a matter of seconds, mostly at a very low cost. These advances in computer technology are as remarkable as they are familiar.

But most people are not aware of how computers and Internet technology are transforming the way students learn. This emerging education paradigm is often called "Virtual Learning," and it has the potential to improve student achievement, educational access and schools' cost-effectiveness.

Specifically, virtual learning uses computer software, the Internet or both to deliver instruction to students. This minimizes or eliminates the need for teachers and students to share a classroom. Virtual learning does not include the

increasing use of e-mail or online forums to help teachers better communicate with students and parents about coursework and student progress; as helpful as these learning management systems are, they do not change how students are taught. Virtual learning comes in several forms:

i. Computer-Based: Instruction is not provided by a teacher; instead, instruction is provided by software installed on a local computer or server. This software can frequently customize the material to suit the specific needs of each student.

ii. Internet-Based: This is similar to *computer-based* instruction, but in this case, the software that provides the instruction is delivered through the Web and stored on a remote server.

iii. Remote Teacher Online: Instruction is provided by a teacher, but that teacher is not physically present with the student. Instead, the teacher interacts with the student via the Internet, through such media as online video, online forums, e-mail and instant messaging.

iv. Blended Learning: This combines traditional in person instruction, directed by a teacher, with *computer-based*, *Internet-based* or *remote teacher online* instruction. In effect, instruction comes from two sources: a traditional classroom teacher and at least one of the forms of virtual learning described above.

v. Facilitated Virtual Learning: This is *computer-based*, *Internet-based* or *remote teacher online* instruction that is supplemented by a human “facilitator.” This facilitator does not direct the student's instruction, but rather assists the student's learning process by providing tutoring or additional supervision. The facilitator may be present with the learner or

communicating remotely via the Web or other forms of electronic communication.

Similar forms of virtual learning are sometimes grouped into broader categories:

- i) **Online Learning:** This is any form of instruction that takes place over the Internet. It includes *Internet-based* instruction; *remote teacher online* instruction; *blended learning* and *facilitated virtual learning* that involves these two virtual learning methods. It excludes *computer-based* learning.
- ii) **Full-Time Online:** This is online learning with no regular in person instruction or facilitation. It is *Internet-based* and *remote teacher online* learning only, though it may include some occasional interaction with human teachers and facilitators.

Virtual learning in Nigeria

Virtual learning is a system that gives room for student to listen to lectures, participate in prepared exercises, ask questions, and receive feedback just as you would do in a conventional classroom, from the convenience of your desktop anywhere in the world with the aid of internet (Anekwe,2017). Virtual learning saves the hussle, expense, and travel time to a training site. Anekwe, (2017) assert that virtual classroom is the classroom, capable of replacing partially or totally the conventional educational, evaluative and administrative functioning of a regular classroom by adopting the advanced computer and ICT technologies like the internet, e-mail, on-line chatting, www, CD-ROMS, DVDs, teleconferencing and video conferencing while Whatis.com, a virtual classroom is, “an online learning environment. It is like the real classroom world where students are participating in virtual classroom in synchronous instruction.

Lokie (2011), also defined virtual learning as expanding the possibility of using internet facilities, platforms, satellite links, and related system to access, analyse, create, exchange, and use data, information, and knowledge in ways which until recently, were almost unimaginable. Olibie, Ezoem and Ekene, (2014) noted that Virtual learning is made possible by developments in Information and Communications Technology (ICT) which have been rapid in recent years and have promised improved education and training to an increasingly diverse cohort of students. With the exponential growth of ICT, the higher education environment is expected to have a greater focus on meeting student expectations with more emphasis upon widening students' participation in ICT. The use of ICT in higher education has also necessitated the concern with development of lifelong learning skills, the emergence of new subject disciplines and increased use of technology in learning. The potential for ICT to provide innovative learning approaches such as virtual learning is already being widely explored in both traditional and non-traditional educational settings.

Experience in the Virtual Learning mode

Tutors who make use of virtual learning promote online interaction with the use of I-learn which also serves the same function as Learning Management System (LMS). Pham, Limbu, Bui, Ngugen, Pham. (2019) are of the view that the dynamic nature of the information technology industry, in combination with evolving e-learning technologies, has created a problem for lecturers in higher education because they have to do everything to encourage students to support the initiative. Sometimes students' success can be achieved simply by preventing them from withdrawing from virtual learning programs. Therefore, lecturers' influence on students' perceptions can play a very important role in motivating virtual learning. The enthusiastic lecturers employ virtual learning by

using the modern social networks such as Facebook, WhatsApp, and Skype etc., which allow instant messaging. It was observed that students like or prefer the social networks because they are user-friendly. Jarmon (2011) argues that lecturers in networked learning environments modify their courses as they go along, meaning the longer a course is taught in a particular format the more effective it is. Many suggest that rather than changing the role of the lecturer, the lecturer will gradually disappear completely with the rise of improved virtual learning technologies and methodologies. Maintaining that technical expertise on its own is not of great value unless lecturers conceive effective ways to utilize it (Jarmon, 2011). Xu et al (2018) argue that the lecturers or instructors may be motivated to use virtual learning in their courses for a variety of reasons. Lecturers should be very concerned about the acceptance of virtual learning tools among their students. Researchers such as Yengin (2011) & Shahzad (2020) have found that perceived usefulness and perceived enjoyment are very important for the adoption of virtual learning applications by students. In order to increase perceived usefulness and enjoyment, lecturers should vary the types of content, create fun, provide immediate feedback and encourage interaction to increase acceptance.

The growth of the online education market is expected to be 16.4% annually over the forecast period, 2016-2023. With the massive growth of the Internet and the sudden appearance and disappearance of COVID-19, university teaching and learning models are expected to further be transformed in the next 10 to 15 years. Thus, this study looked at virtual learning mode in the era of COVID-19 pandemic.

Virtual learning During COVID-19

COVID-19 pandemic shut down all universities in the country except for few public and many private universities that

migrated into virtual learning for one year in Nigeria. Many public universities in Nigeria could not switch into virtual learning due to many reasons. Olabisi (2020) observed that COVID-19 exposed Nigeria's unpreparedness for e-learning.

E-learning is defined by various authors according to their personal knowledge and perspectives, but they all seem to agree that e-learning comprises all forms of electronically supported learning and teaching which are procedural in character and aim to affect the construction of knowledge with reference to individual experience, practice and knowledge of the learner. This definition is supported by Ravichandra (2005), who said that E-learning in the broadest sense concerns itself with learning that occurs online through the internet, off the using of the CD-ROM or other facilities such as radio, television and telephony. E-learning encompasses learning at all levels, both formal and non-formal that uses an information network, the internet, an intranet (LAN) or extranet (WAN), whether wholly or in part, for course delivery, interaction, evaluation and facilitation which Salawudeen (2010) explained, uses network technologies to create, deliver and facilitate learning any time, and anywhere. It is however important for every institution to start thinking of how to deploy available technology in the world for the good of their students after learning from the experience of COVID-19. There is no reason why any higher institution worth its name should suspend all academic activities until the end of Corona Virus which was the case in Nigeria during the pandemic period. Adavbiele (2016) observed that today, many schools in Nigeria are faced with the developmental challenges of the use of Information Communication Technology (ICT) in terms of e-teaching and e-learning processes. Jaime, (2020) submitted that we are living amidst what is potentially one of the greatest threats in our lifetime to global education, a gigantic educational crisis. The pandemic opened many universities'

eye in Africa to move “urgently” to implement alternative methods of delivering teaching and learning using technology and other distance learning techniques in the wake of the closures of higher education institutions so as to limit the spread of COVID-19.

Preference of virtual learning mode

The virtual learning environment is a preferred choice of learning mode for people who enjoy learning on their own, without restrictions on space and time. Some virtual learning options have classes to attend at scheduled times, while others allow you to learn at your own pace. According to (Carey, 2020), There was an overnight shift from a normal classroom into e-classrooms, during this outbreak of COVID 19, that is, educators have shifted their entire pedagogical approach to tackle new market conditions and adapt to the changing situations. During this tough time, the concern is not about whether online teaching/learning methods can provide quality education; it is rather how academic institutions will be able to adopt online learning in such a massive manner. In the works of Liguori and Winkler, 2020, they show that academic institutions would not be able to transform all of their college curricula into an online resource overnight. Distance, scale, and personalized teaching and learning are the three biggest challenges for online teaching. They also show that it is only through innovative solutions that can help deal with pandemic outbreak. There is a requirement for a quick shift to online learning mode; therefore, the products by Google can be really useful under such challenging situations; they are (a) Gmail, (b) Google Forms, (c) Calendars, (d) GDrive, (e) Google Hangouts, (f) Google Jam board and Drawings, (g) Google Classroom, and (h) Open Board Software (not a Google product, helps in recording meetings in the form of files). These tools can successfully be used as an alternative to in person classes (Basilaia et al., 2020).

Challenges of Virtual learning Mode

There are number of technologies available for online education but sometimes they create a lot of difficulties. These difficulties and problems associated with modern technology range from downloading errors, issues with installation, login problems, problems with audio and video, and so on. Sometimes, students find online teaching to be boring and un-engaging. Online learning has so much of time and flexibility that students never find time to do it. Sometimes, online content is all theoretical and does not let students practice and learn effectively. A study conducted by Parkes et.al (2014) found out that students were not sufficiently prepared to balance their work, family, and social lives with their study lives in an online learning environment. Students were also found to be poorly prepared for several e-learning competencies and academic-type competencies. Also, there is a low-level preparedness among the students concerning the usage of Learning Management Systems. Online learning faces many challenges ranging from learners' issues, educators' issues, and content issues. It is a challenge for institutions to engage students and make them participate in the teachinglearning process. It is a challenge for teachers to move from offline mode to online mode, changing their teaching methodologies, and managing their time. It is challenging to develop content which not only covers the curriculum but also engage the students (Kebritchi et al., 2017). The quality of e-learning programs is a real challenge. There is no clear stipulation by the government in their educational policies about e-learning programs. There is a lack of standards for quality, quality control, development of e-resources, and e-content delivery. This problem needs to be tackled immediately so that everyone can enjoy the benefits of quality education via e-learning (Cojocariu et al., 2014). One should not merely focus on the pros attached to the adoption of online learning during the crises but should also take into account the developing

and enhancing the quality of virtual courses delivered in such emergencies (Affouneh et al., 2020). A lot of time and cost is involved in e-learning. It is not as easy as it seems, a considerable amount of investment is needed for getting the devices and equipment, maintaining the equipment, training the human resources, and developing the online content. Therefore, an effective and efficient educational system needs to be developed to impart education via online mode.

Theoretical Framework

The research was anchored on Marshal McLuhan's technology determinism theory of 1964. Marshall McLuhan (1911-1980) anticipated the approaching changes in that it would bring about a new society characterized by greater connectivity and networking. A key strand in McLuhan's thinking is the concept of **technological determinism**.

Technological Determinism states that media technology shapes how we as individuals in a society think, feel, act, and how the society operates as we move from one technological age to another. It also explained that the forms of communication technology that we have created for ourselves have not merely dictated the ways in which we communicate with each other, but that specific technologies are conducive to specific types of cognitive perception, self-conception and even to the entrenchment of specific ideologies and hegemonic codes. (Anaeto et.al 2009)

He states that essentially, we can only think about things in the same way in which we communicate them, therefore the specific nature of a given form of communication technology has massive ramifications in terms of the way we perceive our society and understand our place in it. It is a line of thinking that should be familiar to fans of Saussure and semiotics, and the concept of language itself as an impersonal, independent

entity, which through its organization and coding, restricts what we can express verbally and therefore cognitively, and through which, consequently, only certain, finite ideas and outlooks can become manifest (Anaeto et.al 2009).

This theory is relevant to this study because it looked at how the society operates as we move from one technological age to another. The study objective looked at how learning was delivered during the virtual learning period as well as the preference of virtual learning to classroom learning which shows that learning and life is not static but adapts to change and the trendy changes that come with time.

Method and Materials

Campbell 1998 cited in Tejumaye (2017) defines research design as the framework or plan for a study that is used in collecting and analyzing a set of data.

The descriptive survey research design was adopted for the study. The population of the study comprises all students in Elizade University that participated in the virtual learning during the 2019/2020 Academic session. The sample size is composed of 987 undergraduate students and 210 questionnaires. Students were selected through simple random sampling. It used the list of registered students as a sampling frame from which it drew its respondents for the study. The research instrument used for data collection through structured questionnaire items rated on a 4-point Likert scale, with response options of Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD).

Results and Discussion

The data gathered with the questionnaires were presented in tables, showing the frequency and percentage of responses

offered by the respondents.

A total of 210 questionnaires were administered for the study and 190 numbers were retrieved and found useable. The findings are presented based on the research objectives.

The experiences of students that participated in the virtual learning classes like during COVID-19

Table 1 Sex of Respondents

Sex	Number of respondent (frequency)	Percentage
Male	88	46%
Female	102	54%
Total	190	100%

Table 1 shows the number of respondents that participated in the survey. The Sex of respondents shows that 88 males representing 46% and 102 females representing 54% of the population to make 190 respondents.

Table 2: the experiences of students that participated in the virtual learning classes during COVID-19.

Experiences	Number of respondent (frequency)	Percentage
Technical problem	20	10.52%
Internet lagging	84	44%
Data Issues	10	5.2%
Erratic power supply	72	38%
Teachers' hesitancy in integrating ICT	4	2.1%
Total	190	100%

Table 2 shows the experiences of students that participated in the virtual learning classes during COVID-19 varies from technical Issues, internet lagging, data issues, erratic power supply and *Teachers' hesitancy in integrating ICT*. For an analysis of respondents, 20 respondents choose technical issues representing 10.52% while 84 respondents choose Internet lagging representing 44%. Other respondents choose data issues which have 10 respondents representing 5.2%, 72 others choose erratic power supply representing 38% and 4 respondents choose *teachers' hesitancy in integrating ICT* representing 2.1%. The experiences of students are similar to other works reviewed. It shows that the issue of erratic power supply and internet lagging top the chart of responses while technical issues remain part of the students' experiences. However, the experiences are not without good tales at the end. It was a period where results improved as most facilitators used cbt exams which are more of yes or no as well as pick the best option that best represents the answer. This finding is in line with Olatunde-Aiyedun and Ogunode (2021) that lecturers and students complained of issue of erratic power supply and internet lagging which was experienced in virtual classes during covid-19 lockdown in Nigeria.

Table 3: Delivery of learning during the virtual learning period

Delivery of Learning	Number of respondent (frequency)	Percentage
I-learn	84	44%
Google Meet	72	38%
Email	10	5.2%
LMS	10	5.2%
Zoom	5	2.6%
E-Messaging Platform	5	2.6%
Videos	4	2.1%
Total	190	100%

Table 3 shows the delivery of learning during the virtual learning period. A total of 190 respondents representing 100% used various virtual learning tools to access classes. 84 respondents made use of I-learn while 72 respondents made use of google meet. 10 respondents choose email, 10 choose LMS, five Zoom, 5 e-messaging and 4 people choose video. This implies that all students of Elizade University through one delivery or the other accessed learning during the virtual learning period. This implies that most students of Elizade University had a good experience of virtual learning.

The delivery of virtual learning varies from platforms to platforms. In Elizade, the school adopted LMS, google meet which is similar to what some other works revealed that students used during the COVID-19 period. Respondents noted that delivery of learning was seamless as facilitators and students agreed on the tools and medium that works best for them.

Table4: Students Preference of virtual learning to physical classroom learning.

Delivery of Learning	Number of respondent (frequency)	Percentage
Physical class learning	90	47%
Virtual learning	100	53%
Total	190	100%

Table 4 shows students' preference of virtual learning to physical classroom learning. A total of 190 respondents representing 100% choose various delivery of learning. 90 respondents opted for physical class learning representing 47% while 100 respondents preferred Virtual learning which represents 53%.

The study which examined virtual learning for educational transformation in Nigeria: The perception of Students in Elizade University, Ilara-Mokin, Ondo State found out that student's preference during the pandemic was virtual learning to physical class as a result of the comfort they derived from being at home, thereby schooling became easy compared to the physical classes which entails running from one class to another as well as assignment submission.

This finding is in line with Adesile (2023) that lecturers and students preferred virtual classes to physical classes during covid-19 lockdown in Nigeria.

Table 5: Challenges of virtual learning during COVID-19.

Challenges	Number of respondent (frequency)	Percentage
Slow and Unreliable Internet	40	21%
Unmotivated Students	38	20%
Lack of use of technological facilities	7	4%
Lack of familiar structure	8	4%
Others	0	0%
Total	190	100%

Table 5 shows students' challenges of virtual learning during COVID-19. A total of 190 respondents representing 100% choose various challenges of virtual learning. 40 respondents choose Slow and Unreliable internet representing 21% while 38 respondents said unmotivated students is one of the challenges experienced which represents 20%. 7 respondents representing 4% choose lack of use of technological facilities and 8 respondents choose lack of familiar structure which represents 4%.

The challenges of virtual learning observed in other studies during COVID-19 relates to this work. Those challenges are as a result of the suddenness of the pandemic which caught many unaware, thus educational institutions needed to migrate to virtual learning in order to sustain academic calendars. This finding is in line with Olatunde-Aiyedun and Ogunode (2021) that lecturers and students complained of slow internet connectivity which was experienced in virtual classes during covid-19 lockdown in Nigeria.

Conclusion

COVID-19 pandemic serves as an eye opener being that it allowed for various adjustments in the way of life and way of doing things globally. Its presence in the world necessitated the adjustment in every facet of human endeavor, including education which has changed from the conventional in person learning to virtual learning with the use of technologies. Having studied the experience of Elizade University students during COVID-19, it was observed and found out that virtual learning is a good form of development.

This development ensured that students of the institution were at an advantage because they did not miss or lose any year on the academic calendar. Unlike other schools, they were also not left idle as classes went on like it would have if they were on campus. It also helped both students and members of staff of the university to be familiar with the technical know-how of operating a computer system.

Before the pandemic, most students had minimal experience of virtual learning but they are now more conversant with what virtual learning entails. This study was able to discover that the benefits of virtual learning outweigh the disadvantages.

Virtual learning is also a better form of learning than the classroom form of learning. It is a more enjoyable form of learning because of the smooth and easy way in which lectures are delivered. This study found out that virtual learning had its experiences as well as challenges but helped in the delivery of learning to students through various platforms. Elizade University students preferred virtual learning to classroom learning. This was because many had their results improved due to fewer tasks being given by lecturers while most courses adopted a CBT examination which comes with options; this further helped them to improve their CGPA. As a result of the experiences recorded, it is advised that 60% Physical and 40% Virtual form of learning should be adopted irrespective of the presence of pandemic or not, this will help educational institutions, particularly Elizade University overcome their various hitches experienced while delivering learning during the COVID-19 period. It will also help to prepare ahead for future pandemics which may occur. Educational institutions should be able to remain uninterrupted as far as smooth academic calendar is concerned.

Recommendations

A very important aspect of every research work is to make recommendations or suggestions for improvement. After making some findings and reaching a conclusion, the researchers have the following recommendations:

- i. Elizade University School should approve a blend of both virtual and physical learning for delivery of classes, tests and examinations. This will further help in difficult situations and learners would have been used to either of both if they use them regularly.
- ii. Elizade University should negotiate with network service providers to subsidize data so as to help access uninterrupted network services.

- iii. Elizade University should enter into partnership with organisations that can donate virtual technological gadgets that aids learning.
- iv. Members of staff and students should be taken on training on rudiments of virtual and physical learning. This will address issues of teachers not willing to integrate into the usage of ICT.

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