

ELECTRONIC LEARNING TOOLS FOR NIGERIAN UNIVERSITIES IN THE ERA OF COVID-19 PANDEMIC

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Abstract

The paper examines the electronic learning tools for Nigerian universities in the era of covid-19 pandemic. The world is faced with the COVID-19 pandemic which has held the socio-economic system at ransom and educational sector is not exempted. Educational sector is shifting towards e-learning in order to cushion the effect of this pandemic. However, the challenge of shifting from the traditional teaching method to the e-learning has some challenges. The challenges arise as a result of the varying degree of preparedness of the institutions, lack of infrastructures, and paucity of funds and policies issues in the Nigeria education sector. This paper further discusses the necessity of e-learning; identifies the benefits of e-learning in education. The paper recommends that government should make adequate budgetary allocation to institutions in order to invest into Information Communication and telecommunication. Internet facilities should be provided and made available to the users to enable e-learning preparedness on both the lecturers and learners.

Keywords: COVID-19, E-Learning, education, ICT, mobile phone browser.

INTRODUCTION

Globally, the coronavirus disease 2019, which is popularly known as COVID- 19 has great impact on the educational system since its inception. In Wuhan the business hubs of China experienced an outbreak of this epidemic which resulted to the death of thousands Chinese

within a short time and a quick spreads to thousands of citizens in other countries which in turn has caused the death of over 1000.000 million persons all over the world and 33million persons contaminated with the virus, (World Health Organisation report 2020).

The outbreak of this disease has changed the operating conditions of the world within some months. This pandemic ravaging the world has also taken its effects on many sectors of the economy both in developed and developing countries. Almost all the countries have stopped face-to-face learning, many students' education is affected worldwide with COVID-19 This effect is also evident in the Nigeria educational sector which the academic session was halted by the Federal Ministry of Education in order to curtail the spread of this virus in educational institutions. Although, this decision came as a shock to many educational institutions as many of these institutions were not prepared for the sudden disruption, others have seen it as a step in the right direction. The sudden suspension of schools, colleges, universities and other government institutions in most countries around the world and Nigeria in particular have resulted in temporary closure of all educational institutions in an attempt to contain the spread of the pandemic.

The COVID-19 outbreak led to universities closure, lockdown and most institutions have moved onto online education or electronic learning (e-learning) instead of conventional face-to-face teaching and learning method. However, the shift to online mode has raised many queries on the quality of education (Sahu 2020). Amid these hard times, teachers have been utilizing e-learning platforms to teach the students in order to sustain the system.

E-learning technologies have changed the traditional way of education to the modern way. Thus E-learning is covered under a larger term of technology-based learning through websites, learning portals, video conferencing, YouTube, mobile apps. Emailing etc. Currently, E-learning is enhancing students' knowledge, even the academic staff and professional and industry people are not left out. (Chopra, G., Madan, P. Jaisingh, P., Bhaskar, P. 2019). E-learning refers to the use of modern tools, such as computers, digital technology, and electronic media etc., to facilitate learning. E-Learning was first used in 1999 at a Computer-Based Training (CBT) systems seminar. It is a training method in which the primary data transfer takes place in a computer through software over internet or intranet. It is also described as virtual or online learning which offers a way to share reading materials using internet through emails, or webinars. It has become an important part of modern education and it shows huge involvement of ICT in the present teaching-learning process (Ogonu, 2020).

Educators can share study materials and lectures in the form of PPT, PDF or Word document by uploading them on their respective university webpages, on whatsapp or through emails to the students during the lockdown. According to Felix, (2020), lectures have been also taken through WeChat, by sharing audio-visual videos through emails, by different online teaching apps like Voov, Zoom, Superstar, g-suite, cloud meeting etc. The application of these technologies have impacted positively to the teaching-learning processes in our educational system. It offers teachers a new pedagogical approaches to the system.

According Yusuf, (2020), COVID-19 pandemic made schools in Nigeria to adopt the use of the learning platforms and apps in their teaching. Some of the platforms are already established like ED-TECH and cloud computing as they are available in reasonable prices and are easy to access. Global- transition to online-education in educational institutions during the pandemic crisis is a welcome development. Educational institutions from all around the world have migrated from the traditional methods of learning to imparting knowledge through online means. The education system has suddenly shifted from the conventional classroom environment to electronic devices and online applications (Chiang, C-Y. Boakye, K., Tang, X. (2020).).

The challenge then remains how this pandemic affect students and academic calendars. However, despite the immense benefits of the e-learning such as reduction of travel cost to learning centres, wide range of tools that helps teachers and learners to be creative, innovative and resourceful in all teaching and learning activity. Other benefits are Competency-Based learning which prepares students for a modern economy straighten and shorten the path from studies to job. E-learning platforms enables the exchange of curriculum. Students from different institutions can have access to the curriculum of others to update theirs through MIT's Open Course Ware, therefore encouraging collaboration, Moreover, learning platforms make for free, open- source textbooks, digital textbook rental, etc. possible. It makes also current textbooks more accessible than ever before. Most Nigerian universities have not embraced it due to poor budgetary allocation, corruption and unpreparedness. These and others are contributing factors to the inability of many public tertiary institutions in embracing e- learning during the global COVID19 pandemic in Nigeria.

History of COVID-19

The COVID-19 pandemic ravaging the world was first reported on December 1, 2019, although the first hospital intake date was December 16, 2019. By December 30, 2019, a cluster of

pneumonia patients in Wuhan, China was reported to the World Health Organization's Beijing office (WHO 2020), Clinical presentations indicated a shared viral strain of pneumonia, which was named 2019-nCoV, or 2019 novel coronavirus. The following day, an epidemiological alert was raised by local health authorities about the virus (Chiang, C.- Y., Boakye, K., Tang, X. 2020)). The World Health Organization (WHO) declared Covid- 19. A Public Health Emergency of International Concern (Lei 2020), and on March 11, 2020, as a pandemic (World Health Organization, 2020). The rapidity of this spread can be understood by characteristics of the virus itself.

According to QIU 2018, coronavirus is an animal virus arising from an as-yet- unknown animal reservoir (perhaps bats and snakes) that spread to other animals (Civet Cats) and then to the first infected human in Southern China in 2002. COVID-19 initial transmission appeared to be from an animal source, but there are also strong evidences now that it can be transmitted from (person- to-person) who are just mildly ill or not even showing symptoms yet. WHO has just described the new coronavirus outbreak as pandemic and a global health emergency as its spread within a short time and continues to rapidly increase unimaginably across countries and continents affecting not just lives but also livelihoods. So continuation of normal schooling practices introduces a great deal of uncertainty. It is in this context of risk mitigation through social distancing and the particular uncertainty of transmission risk amongst the student-age population that the face-to-face schooling was prohibited and the alternative becomes the online/e-learning during this pandemic (Michael, 2020).

E-Learning

E-learning refers to a learning system that is conducted via electronic media. It is the use of educational technology in teaching and learning in educational institutions around the world. Markus (2008), states that e-learning is a learning method which has shifted learning from its traditional form to Information Communication Technology (ICT) based, and self- organized learning which offer learners control over subject matters. The word e-learning was coined by Elliott Maisie in 1999, marking the first time the phrase was used professionally.

E-learning refers to a learning system that we can obtain through the internet using an electronic device. We also call it online learning or online education. The & in E- learning stands for 'Electronic. Hence, the original term 'electronic learning. The word 'online means with an Internet connection or via the Internet. The term may also refer to a network that can provide

knowledge and skills to one or more individuals. The network can provide the knowledge or skills either to everyone simultaneously or individually.

The increasing use of e-learning as a teaching tool by teachers in schools, is gaining more and more relevance (Moore, Dickson-Deane & Galyen, 2011). Thus e- learning and ICT educational facilities provide a means through which teachers are able to embark on the process of teaching and learning in a manner that is modern and commonly used around the world. It reduces the exactitudes of teachers not merely talking about the relevance of this modern technological devices, but instead ensures that students have a first-hand experience of how these devices function. It offers a way to share reading materials using internet through documents, emails, presentations or webinars even in a far distance.

According to Ezch & Ohia (2014), education world over is been considered as a life transforming activity which equip its receptors to make a meaningful contributions to the development of the society. Hence, ICT in teaching and learning is a priority that helps to achieve this especially at this time of COVID19 where contact exposes one to the danger of infection. The desire to utilize ICT in the instructional process will help students to continue their studies amidst the pandemic According to Oyedeji, Shahu & Oluwalola (2009), the call for effective utilization of e- learning or ICT in school is intended to give the students the needed information and exposure that will get them fully prepared to face the challenges that may occur as a result of global changes. It gives students the opportunity for individualized learning and also accelerates, enriches and deepens skills that will motivate students to learn. Teaching and learning in school become more efficient and productive when variety of tools are presented to the students which indicate professionalism. Educationist should make e-learning an integral part of teaching and learning process because it will help the teachers to convey needed information to students which will provide safety in lecture delivery, make them feel at home, unintimidated in this pandemic and even at post COVID era. Some of the e-learning tools or devices used by the Nigerian institutions during the Covid-19 pandemic are:

Electronic mail

E-mail (Electronic mail), refers to a method of exchanging digital messages from one individual to another or more recipients simultaneously. E-mails operate across the internet or other computer networks and they are used in business, government and educational institutions in general. In some educational institutions, teachers and students use emails in the teaching and learning process. E-mails are used to send students assignments, submit corrected

school work, and even for communication purposes within and outside the school environment (Yang, 2012). E-mails play an important role in reducing teacher's workload and expenses by making it possible for teachers to send important information to students, colleagues, other institutions and educational stakeholders in real time without the rigours of going to the post office or assembling in a place. This becomes a measure to contain the spread of the Covid-19 pandemic which prohibit contact, in other to avoid its spread among the students.

Mobile Phone Browser

A mobile browser is a web browser designed for use on a mobile device such as a mobile phone or Personal Digital Assistant (PDA). Mobile browsers display web content effectively on small screens of portable devices. They must be small and efficient to accommodate the low memory capacity and low-bandwidth of wireless handheld devices. They may automatically create mobile versions of each website page and can be accessed anywhere in the world. In some institutions, lecturers and students use this ICT facility (mobile phone browser) for teaching and learning in the classroom, since they are easily available and relatively cheap (Annetta, Minogue, Holmes, & Cheng, 2009). Lecturers who make use of mobile phone browser in teaching expose their students to events and materials that are going on internationally in a cheap and convenient manner. This reduces the stress and expense on teachers associated with using an internet enable desktop computer for the whole class. It offers the institutions a means of controlling the spread of Covid-19 since the lecture is online-based without physical contact.

Zoom

Zoom is a web-based video conference tool with a local, desktop client and a mobile app that allows users to meet online, with or without video. Zoom users can choose record sessions, collaborate on projects, and share or annotate on one another's screen, all with one easy-to-use platform. These steps enabled the lecturers to communicate to their students during this COVID-19 pandemic. It is worthy of note that all the higher institutions that had online lecture during this pandemic made use of zoom among others. Other types of zoom used are: Zoom Chat, Zoom webinar and Zoom Phone. Zoom Phone is the enterprise cloud phone system from Zoom, providing businesses and educational institutions with an all-in-one environment for voice and collaboration. You can access the features of a traditional phone system, including centralized provisioning and management, as well as auto-attendants and HD calling. One-touch meeting or call join between the lecturer and student can enable them discuss and clarify a fact about a course or an assignment.

Again, Zoom Video Webinars allow you to host events with up to 100 interactive participants who you can interact with, and 1,000 view-only attendees. Like other Zoom solutions, webinars are easy to set up with branded emails and registration forms available. There are also multiple integrations for your CRM systems too. Features include everything from live broadcasting, to event assistance from Zoom specialists, and even reporting and analytics. You also get on-demand viewing solutions too, with auto-generated transcripts. With this, the students can join as participants while the lecturer is the host and admit them to the classroom online. This enable them to see themselves as the lecture goes on.

Furthermore, Zoom Chat is included with your Zoom Meetings license. Designed to keep teams connected, Chat ensures that you can streamline your teams with quick instant messaging, and integrations with all your favourite tools intelligent search is built-in, and you can choose between one-on-one and group chat too. Starred channels and contacts make it easy to stay focused, while status and presence features show you who is online.

Whatsapp

Whatsapp, according to Houdinik & Deshen (2014) is a smartphone application for instant messaging. Whatsapp application gadget has unique digital features and the ability to enhance communication within a group. Classroom communication between teachers and students using Whatsapp application gadgets in teaching and learning is advantageous because it creates pleasant academic environment and influences the manner in which conversation is accessed between teacher and students. Usage of digital Whatsapp gadgets in communication between teachers and students in and out of school environment enhances teaching and learning, and makes teachers and learners to be active in their studies (Calvo, Aribiol & Iglesias, 2014). It allows users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other media.

The necessity of e-Learning in COVID-19 era

The necessity of e-learning in Nigerian education system at this time of COVID-19 has made digital devices very important in our institutions. Digital technology devices have rapidly contributed to the changing trend of our teaching technique especially at this time where physical contact or face to face education is prohibited to avoid Corona virus disease. This provides an alternative method or way of training, directing, coaching and guiding a learner to understand the thesis of rudiment of au idea that can impart the learner ability to understand what is being taught.

The introduction of digital device in searching has meant that teaching and learning business in Nigerian institution of higher learning is reserving most of their who traffic from user browsing in digital contexts, However, technology has always played a significant roles in teaching and learning even though they were enthusiastically embraced by educator (Coban, 2001) This pandemic era has encouraged social distancing, also called physical distancing That is a set of non- pharmaceutical interventions or means intended to prevent the spread of this contagious disease (Covid-19) by maintaining a physical distance between people and reducing the number of times people come into close contact with each other Physical distancing helps limit the spread of COVID-19 this means we keep a distance of at least six metre (6m) from each other and avoid spending time in crowded places or in groups. Maintaining physical distance is an important strategy to slow the spread of COVID-19, but should stay socially connected through on line and weh based interactions/learning

Another non-pharmaceutical measure in containing the spread of corona virus pandemic is staying at home as much as possible which is the right thing to do now. Limiting gatherings with people in face to face classroom setting, like group activities and studies can reduce the spread of COVID-19. Therefore, protect yourself and others. Do your part by staying at home is one of the proffered solutions to the COVID-19 infection which online education has an embedded in its approach. What has been made clear during this pandemic is the importance of disseminating knowledge across borders, people, and all parts of society.

The challenges of e-learning in Nigerian universities

The challenges that most of Nigerian universities face (especially the government owned institutions) in adopting e-learning are poor budgetary allocation, corruption and unpreparedness and others. E-learning facilities are financial intensive and government universities are ever faced with low budgetary allocations which could not provide the needed facilities for the e- learning facilities.

Another challenge of e-learning according to Dhawan (2020), is epileptic power supply in Nigeria as there is no guarantee of at least some hours of power supply at a stretch. This is because irregular power supply in Nigeria is seen as an age- long problem which has affected almost every aspect of economy with no exception to the educational sector. This poor power supply has cause a major setback for technology advancement of many universities in Nigeria. Most areas in Nigeria where some students are residing are not even connected to the national grid as such, these students will experience difficulty in utilizing the e- leaning platforms

effectively. Also, shortage in power supply has brought difficulty in powering of educational gadget such as smart phones, laptops and desktop computers which are needed for learning.

A major obstacle to e- learning in Nigeria is tied to the high cost of internet data service. The internet service required to connect to this e- learning platform sometimes is epileptic. The cost of purchasing the data bundle is so high which might be difficult for both students and lecturers buy. In cases where there is data, poor internet connectivity by network providers is of major concern especially when it comes to video conference where both the students and lecturers have to interact. The cost of accessing the internet in Nigeria is still on the high side, hence, some students find it difficult to afford. The cost of Personal Computer (PC) and good smartphones are still very high in Nigeria considering the income level of an average worker in country.

Few students that are privileged so have a laptop and sometimes are not connected to the internet as this attract extra cost which they cannot afford. Also this poor internet connectivity as well as high cost of data has resulted in a low attendance of students during the online classes. A further challenge posed by the e-learning education is the incapability of lecturers to assists learners to develop the skills and training required to make the e-learning platform effective E-learning creates room for complete absence of physical interactions between students and lecturers and among their colleagues. Sometime, the lecturers themselves are not skilled enough in the use of these platforms.

From the ongoing discussion, one can say that online learning or e-learning faces many challenges ranging from learner's issues, educators, issues, and content issues.

Benefits of e-Learning in Education

1. It reduces travel cost to learning centres
2. It offers a wide range of tools that helps teachers and learners to be creative, innovative and resourceful in all teaching and learning activity
3. It is a solution to the spread of corona virus because it inhibits face-to-face contact through classroom interaction.
4. It improves the quality of the learning experience and extends the reach of every student at anywhere and at all times.
5. It provides individualized learning experience for all.

Conclusion

The benefits of E-learning cannot be overemphasized in this COVID-19 era, to this effect, there is need to use online facilities during lecture delivery, which could be in the form of zoom sites, whatsapp, smart phones, multimedia etc. In like manner. Students should be encouraged to use computer to develop their lecture notes to encourage the use of ICT in this COVID-19 era where physical contact is prohibited. Furthermore the use of internet with the use of email and other devices which will play a major role in re-capturing of lectures, submission, correcting and marking of assignments, also more collaborative approach should be used in teaching like collaborative learning with inferential. Learning with activity-based learning and learning labs through video conferencing. The paper has also shown that electronic or e-learning is confronted with a lot of challenges in Nigerian universities. Especially during this pandemic crisis as this is the only medium available for learning. When movement is restricted and educational institutions of learning are on lockdown. The adoption of e-learning system in universities will reduce the issue of face-to face contact learning that can aid in spreading the Corona Virus.

Recommendations

The researchers recommend among others that:

1. The lecturers and students should be trained and retrained in online educational system.
2. On-line facilities should be made. Available by the government and made accessible to the students and the lecturers such as computers, servers, bandwidths, digital technology. Electronic media, and associated software learning situations and interactive exercises that facilitate learning. Adequate and steady power supply should be provided to facilitate the online education.
3. Budgetary allocation to the institution should increase in order to sustain the E-learning in our universities

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