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COVID-19 and E-Learning: Nigeria Tertiary Education System Experience

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Abstract - Globally, the world is faced with the COVID-19 pandemic which has held the economy at ransom not exempting the educational sector. This pandemic has brought about recent changes and disruptions in the educational sector which serves as a catalyst for the development of any nation. Educational sector globally is seen to be shifting towards e-learning in order to cushion the effect of this pandemic. However, developing countries evidence from the Nigeria experience are posed with the challenge of shifting from the traditional teaching method to the e-learning during the pandemic. The challenges arise as a result of the varying degree of preparedness of the institutions, lack of infrastructures, paucity of funds and policies issues in the Nigeria education sector. It is in tandem with this prevailing issues that this study examines the Nigeria educational system based on the global pandemic. This paper further discusses the necessity of e-learning; identifies and discuss challenges as well as opportunities. Recommendations to enhance e-learning during and post COVID-19 were also given.

Keywords: COVID-19, E-Learning, Nigerian Universities, Academic Calendar, Students

I. INTRODUCTION

The coronavirus which is popularly known as COVID-19 has disrupted the global educational system as most countries around the world have resulted in temporarily closure of all educational institutions in an attempt to contain the spread of the pandemic. According to the report by UNESCO (2020), the closure of educational institution has impacted over 91% of the world's student population. The ripple effect of this pandemic has been felt by both the educators and students in primary, secondary, colleges and universities as academic sessions were disrupted after the coronavirus was declared a public health emergency. This has left many students and educators in a rude shock as some of this institution were at the point of preparing for examination, admitting of freshmen, beginning of a new semester, amongst others. Universities around the world including Africa have resulted in looking for ways to cope and adapt to academic changes as a result of this pandemic.

This COVID-19 pandemic has shaped a new normal for the higher education sector across the globe from transforming the online learning platform, restructuring application processes, and stimulating crisis management strategies. The COVID-19 outbreak has opened up the importance of online

education and distance learning however, just a handful of the world's education that are taught online. According to Eduventure (2019), in the United States of America, about 15% of the total undergraduate students are enrolled for online learning and distance learning. Developed economies such as Canada, United Kingdom and United States have experienced a decline in their educational revenue as foreign students either quit their studies or were sent back home. The pandemic has resulted in a more severe consequence on schools that do not possess the online learning platform.

The COVID-19 pandemic ravaging the world have taken its effects on many sectors of the economy especially in Nigeria. This effect is also evident in the Nigeria educational sector has 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 institutes as many of these institutions were not prepared for the sudden disruption, others have seen it as a step in the right direction. The challenge then remains how will this pandemic affect students and academic calendars hence, the use of e-learning as an alternative learning method. However, despite the immense benefits of the e-learning platforms available, not many Nigerian universities have embraced it.

Poor budgetary allocation, corruption and unpreparedness are contributing factors to the inability of many public tertiary institutions to embrace e-learning during the global COVID-19 pandemic in Nigeria. A ten year (2010-2019) budgetary allocation to the Nigerian education sector as shown in Table 1 has been very poor and below the 15 to 20 percent recommended by UNESCO for developing countries like Nigeria. With budgetary allocations like these comes deficiencies that does not allow for growth of e-learning and creates challenges when institutions try to embrace e-learning during pandemics such as the COVID-19.

Table 1: Nigeria Budgetary allocation to Education (2010 - 2019)

Year	Budget (₦Trillion)	Educational Allocation (₦ Billion)	Percentage of Budget (%)
2010	5.160	249.09	4.83
2011	4.972	306.30	6.16
2012	4.877	400.15	8.20
2013	4.987	426.53	8.55
2014	4.962	493.00	9.94
2015	5.068	392.20	7.74
2016	6.061	369.60	6.10
2017	7.444	550.00	7.38
2018	8.612	605.80	7.03
*2019	8.830	620.50	7.03
Total	60.973	4413.17	7.24

Source: Ndujihe (2018) - Vanguard Newspaper

*Ameh and Aluko (2019) – Punch Newspaper

Table 1 reveals that for the 10-year period, the education sector got an average of 7.24% as against the 15-20% recommended by UNESCO. This definitely will not allow infrastructures such as ICT platforms, electricity, teacher-tutor training amongst others needed to allow e-learning grow in Nigeria to be available.

However, some universities particularly the private universities in Nigeria have embraced e-learning as a means to ensure that their academic calendar is not totally distorted. These universities have devised the use of information and communication technology tools to facilitate learning during this pandemic. Several e-learning platforms have been adopted by universities although these platforms are in exhaustive. They include, Zoom, Microsoft teams, google hangout (meet), skype, Bamboo learning, google classroom, Docebo, WIZIQ, Adobe captivate, Elucidat, Blackboard learn amongst others. Private universities seem to be at the forefront of e-learning capacity in Nigerian universities as a result of their innovative and flexible operations. Regrettably, it appears that most public universities have not been able to embrace the e-learning platform to the detriment of their students and the society at large. Various factors might be responsible for these in the public universities such as student population, training of lecturers and students, sustainable internet facilities amongst others. The aforementioned factors coupled with the universities union incessant strikes play a key role for the set back of public universities academic activities during the COVID-19 pandemic in Nigeria.

Private universities have also embraced the e-learning platform to continue with the academic calendar due to the financial commitment to their workforce as shutting down will bring about difficulty in revenue generation. However, the public universities largely depend on government subvention and TETFund assistance because of the discounted

tuition paid by their students as compared to their counterparts in private universities. The efforts of the national open university of Nigeria (NOUN) is worthy of note has the institution currently operate on the e-learning platform where learners and lecturer can interact. The sporadic pace of ICT is seen in the innovative development of advanced countries such as Japan which conducted a virtual convocation ceremony for its students using robotics (Kacerauskas & Kusaityte, 2020). In America, universities such as Harvard university have embraced e-learning platforms but in most African countries such as Nigeria, traditional forms (physical contact) of learning has been the norm. Despite the benefits of the e-learning platform, there has also be constraint in the full actualization and utilization of this platform due to the dynamic Nigeria environment. This paper will examine some of these challenges and opportunities which can be leverage on by both private and public universities in Nigeria.

II. LITERATURE REVIEW

The term e-learning connotes electronic method of learning which is associated with computerized learning in an interactive interface at the convenience of both the learners and lecturers. E-learning also implies educationally technology. According to Eze *et al.* (2018), e-learning education is concerned with the wholistic incorporation of modern telecommunication equipment and ICT resources into the education system. Parks (2013) posits that the word “e” should refer to “everything, everyone, engaging and easy” in addition to ‘electronic’. The benefits of the e-learning include better content delivery, interactivity, quality content delivery and confidence of both learners and lecturers in the educational sector. Despite the advantages of the e-learning, it is still at its infancy and early adoption stage in Nigeria due to its dynamic structure.

2.1 Challenges of e-learning in Nigeria

E-learning is still confronted with a lot of challenges in Nigerian Universities especially during this pandemic as this is the only medium available for learning. One of these challenges is epileptic power supply in Nigeria especially in rural areas as there is no guarantee of at least two hours’ power supply at a stretch. Irregular power supply in Nigeria is seen as an age-long problem which has affected almost every aspect of Nigeria economy with no exception to the educational sector. This unstable poor power supply has caused a major setback for technological advancement of many universities in Nigeria. Most rural areas in Nigeria where some students are resident are not even connected to the national grid and as such, this student will experience difficulty in utilizing the e-learning platform effectively. Also, shortage in power supply have brought difficulty in powering of educational gadget such as smartphones, laptops and desktop computers needed for learning.

Another major obstacle to e-learning in Nigeria is tied towards the high cost of internet data services. The internet service required to connect to this e-learning platform sometimes

requires a lot of data. The cost of purchasing the data bundle is so high which might be difficult for both students and lecturers. In cases where is even data, poor internet connectivity by network providers is of major concern especially when it comes to video conferences 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 a challenge to afford. The cost of a personal computer (PC) and Laptop are still very high in Nigeria considering the income level of an average worker in the country. Few students that are privileged to have a PC/Laptop are not connected to the internet as this do attract extra cost which they cannot afford. Also, this poor internet connectivity and high cost of data has resulted in low attendance of students during the online classes. This low online class attendance has also been linked to the poverty situation in the country as some families and students might not be able to afford basic needs such as food and clean water let alone the expensive gadgets or resources to sustain them for online learning. Another challenge posed by the e-learning education is the incapability of lecturers to assists learners develop the skills and training required to make the e-learning platform effective. E-learning creates room for complete absence of physical personal interactions between students and lecturers and among their colleagues.

2.2 Opportunities applicable to use of e-learning

Despite the challenges posed by integrating and embracing the e-learning system, it has become the most preferred platform to learn during global pandemic periods such as the COVID-19 where movement is restricted and institutions of learning are on lockdown. The adoption of e-learning system for universities will enhance the efficiency of knowledge as both students and lecturers will have ease access to a large amount of information within the global village. In most universities, class space for lectures is usually a problem as some times there is clash in timetable or overpopulated students.

The e-learning system will completely reduce the issues of insufficient classrooms for lectures as student can easily take the lectures online without any disruption at their convenience. Also, e-learning afford students and lecturers to participate in class in their comfort zone with basic amenities they need when compared to the traditional teaching method where sometimes these basic amenities are unavailable for conducive learning. This is supported by the findings of Pingle (2011) that undergraduates in India have a higher acceptance level of comfort working with computers and other e-learning packages than the traditional face-to-face classroom.

E-learning provides a platform for students to interact with themselves through the discussion forum which eliminates the barrier of participation. It also allows for effective communication and fosters relationship between students and lecturers. It also allows students to study at their open pace and convenience as the lecture material is readily available and the content delivery of the lecturer is quite accessible to

them. Hence, it increases satisfaction and decreases stress. 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. The e-learning exposure will ease the student's integration into organizations where such platforms are operational.

E-learning can be said to be cost effective as it reduces travel time and infrastructural development in terms of buildings. Arkorful and Abaidoo (2014) discovered that the cost benefit of e-learning in training students is lesser than that of physical (face-to-face) contact. This was arrived at after considering some factors namely: the number of students trained; distance to be travelled; time of training. Guragain (2016) also posit that the value of face-to-face class contact content development, distribution and maintenance cost are exclusively high as compared to e-learning which is of lower cost. All these shows that adoption of e-learning tends to solve educational challenges especially at a time such as the COVID-19 pandemic.

III. CONCLUSION AND RECOMMENDATION

The study concludes that the present world pandemic is making the educational sector to look inward. Institutions are now embracing e-learning which serves as alternative to the face-to-face contact learning thereby helping the institutions cover gaps the pandemic might cause the institutions academic calendar. The adoption of e-learning during the COVID-19 pandemic has exposed a lot of lapses and gaps to be filled in the Nigerian educational system. This is most obvious amongst the public universities. The challenges of e-learning in Nigeria ranges from irregular power supply, high internet subscription costs, poor internet access amongst other factors. The applicable opportunities associated with the embracing e-learning includes lecturers'/learners convenience, exposure and cost benefits.

This study recommends that government needs to be more firm in their handling of public universities administration and help prepare them for the adoption of ICT and e-learning in Nigerian institutions. Furthermore, private universities should be proactive in ameliorating the challenges identified in this study and build on the opportunities e-learning offers institutions even post COVID-19. Furthermore, effective government policies that will sustain workable social infrastructures that will be sustainable even during unforeseen crisis is required. Finally, government should infuse more monetary resources in Nigeria's educational sector so that its institutions can compete globally.

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