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COVID-19 Pandemic and Higher Education in Nigeria: The Reality and a Call for Sustainable Digitalization

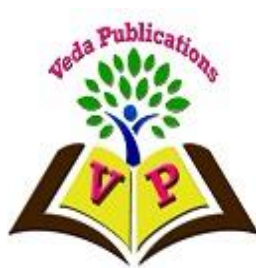[1,2&3]Adebakin, Azeez B*., Aliyu, M. Olasunkanmi & Ayanlowo, Adesoji E.

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Abstract

Considering its derivable benefits, the significance of higher education to the production of societal skilled work force cannot be overemphasized. Education at this level is instrumental to a just and egalitarian society, hence, its continuous relevance to national development. However, global emergency health challenge truncates teaching-learning activities across all levels of education, higher education inclusive. The challenges include school closure, distortion of academic calendar and students' loss of access to formal physical learning environment. This paper, therefore, explores the reality of COVID-19 pandemic on Higher Education in Nigeria. Viewing this through the lens of global health challenge, with specific domestication to Nigeria, the paper was based on secondary data, sourced from existing resources, using the desk research method to establish how COVID-19 has disrupted Higher education activities. The paper contributes to knowledge, provides justification for accurate, reliable and evidence-based practical accounts of Higher Education Institutions activities during pandemic and advocates for an introduction of a sustainable digitalization of higher education services. This is with a view to promoting the deployment and applications of digital solutions (such as Learning Management System, Microsoft teams, ClassDojo, Google meet, Zoom, Google classroom, Moodle and others) for teaching, learning and other higher education management activities in Nigeria.

Keywords*: COVID-19, Pandemic, Epidemic, Virus, Higher Education, Digital Education.*

1. Introduction and Background

Higher education is fundamental to any society considering its derivable benefits which are invaluable to national development. It is capable of equipping individuals to become functional members of the society, whose three 'Hs'- head, heart and hands are developed to contribute to societal well-being. Education at this level could be considered as the principal instrument not only for academic, technical and vocational progress but also for socialization, political survival and effective transition into the world of work. Therefore, investment in higher education is a necessary condition for promotion of economic growth and development as the entire developmental apparatus of socio-economic structure revolves around functional education.

In spite of such monumental benefits accruable to higher education, especially for developing nations such as Nigeria, teaching and learning has been truncated and constrained by the rapid spread of COVID-19 pandemic for over a year. This virus poses serious threats on higher education community so much that both students and lecturers unwillingly vacated campuses across the nations. Therefore, the practical measures to curb the spread of the pandemic through non-pharmaceutical interventions, as recommended by the Nigerian Centre for Disease and Control (NCDC), are self-isolation, regular hand wash, use of face mask in the public and social-distancing. This, in Nigeria like many African countries, informs a paradigm shift in higher education pedagogy and didactics delivery.

Alien to the traditional teaching-learning practices in many Higher Education Institutions (HEIs) in the country, the face-to-face activities are gradually going into extinction. This informs the use of Information Communication Technology (ICT) in engaging students through virtual and/or online teaching and learning using different ICT platforms for such engagement. These include but not limited to Learning Management System (LMS), Microsoft teams, ClassDojo, Google meet, Zoom, Google classroom, Moodle and many others that are capable of not only bridging the barrier of distance between the students and the lecturers (Qiu et al., 2017) but basically protecting against the transmission of the Virus.

Since the reality of COVID-19 has truncated academic activities in the Nigerian HEIs, virtual and e-learning are being considered by educational planners and managers as a leeway against further distortions of teaching and learning. This paper therefore identifies associated

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problems within its context, conceptualises higher education and provides information on the outbreak of COVID-19 in Nigeria. It further synergises COVID-19 and the Nigerian higher education, showing the reality of the pandemic on this level of education. The paper, therefore, recommends digitalization of higher education while emphasizing its sustainability.

2. Problem

Effective management of teaching and learning remains a core activity that promotes the implementation of educational programmes offered by HEIs. This is to ensure that the goals of education are achieved as stated in the National Policy on Education (NPE) that HEIs shall provide quality teaching and learning as part of the strategies to promote quality education at the tertiary level (Federal Government of Nigeria, 2013). However, the outbreak of COVID-19 pandemic has disrupted educational activities in Nigeria with public schools at a high peril of this menace.

The magnitude of this problem HEIs is manifested with regards to closure of schools, disruption of academic calendar, reduction in international education, cancellation of local and international conferences, loss of HEIs workforce and students' loss of access to formal learning among others. While these challenges persist, several attempts to investigate the way forward featured the introduction of digital learning in HEIs as one of the indispensable solutions (Muftahu, 2020; Samuel, 2020; Oluka, Ezeh & Okotie, 2020) but with more emphasis on the immediate remedy.

Therefore, the thrust of this paper is to critically explore the current reality of the pandemic and introduce sustainable digitalisation as a long term solution to future disruption of educational activities in Nigerian HEIs. This is with a view to promoting the deployment and application of digital solutions for teaching, learning and other management activities in a continuum and preparation for future uncertainties that may arise beyond the ongoing COVID-19 pandemic.

Method

A desk research method was adopted in writing this paper. The method allows for cross-referencing and collection of data from existing resources such as academic publications, empirical reports and statistical publications, the Internet, bulletins and periodicals (Management Study Guide, 2013). The position of the paper was based on secondary data on

COVID-19 pandemic and higher education in Nigeria. Materials used were sourced via scientific databases and websites of prominent government agencies. These include Research Gate, Google Scholar and the Nigeria Centre for Disease Control (NCDC). Keywords and phrases such as COVID-19, pandemic, epidemic, education, virus, COVID-19 reality, digital education and higher education were included in the web search. Over 85 publications, articles and reports, considered potentially relevant were retrieved but only 25 were selected for use in the study. Factors such as content and contextual relevance to the variables in the paper were considered for the selection.

Higher education in Nigeria

While education is a veritable instrument for ensuring just and egalitarian society (FGN, 2013), higher education is more important because of its significance to the production of societal trained work force. Within the lens of its tripartite roles, higher education, globally and particularly in Nigeria, promotes teaching, research and community service. These roles focus on producing manpower for socio-economic and political development which are very germane to national growth and development (Abdulkareem, Fasasi & Akinubi, 2011).

The Association of African University (AAU) Working Group on Higher Education claims that higher education is not limited to university education but also all tertiary education. In addition, AAU stresses that higher education is all post-secondary education which includes universities, polytechnics and technical colleges, teachers training institutions, institute for medical training and agriculture, colleges of technology, colleges of education, distance education centers, and research centers and institutes (Jaji, 2004). This claim is in agreement with the National Policy on Education (FGN, 2013) and this paper thus adopts the claim for the description of HEIs.

The structure of Nigerian higher education involves a lot of complexity when it comes to decision-making and communication process. Therefore, the prominent actors in the day to day management of Nigerian higher education are the; visitor (president, governor or founder), Chancellor, Pro-Chancellor (Chairman of council), Governing council, senate, the administrative head of institution which is Vice-Chancellor in the university, Rector in the polytechnic and provost in the colleges. Others are deputies to the administrative head,

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Registrar, Bursar, Librarian, Directors, Deans of College/Faculties/School/, Head of Departments and Directors, Heads of Division, Heads of Units and students (Kabiru, 2018).

Outbreak of COVID-19 Pandemic in Nigeria

The outburst of the Coronavirus Disease of 2019 (COVID-19) is a major and recent historic incidence in the world. Report has it that this novel human disease whose causative agent is called Severe Acute Respiratory Syndrome-Coronavirus 2 (SARS-CoV2) was first discovered in Wuhan City, Hubei Province of China on December 8, 2019 and was rapidly spreading and claiming lives across continents. This informs the declaration of January 30, 2020 by the World Health Organisation (WHO) that COVID-19 is a Public Health Emergency of International Concern (PHEIC). By March 11, 2020, the WHO pronounced COVID-19 as a global health pandemic based on the epidemiological criteria that more than 100,000 people have contracted the virus in a minimum of 100 countries (Amzat et al., 2020; Ajisegiri et al., 2020; Ohio et al., 2020).

In Africa, the first COVID-19 case was reported in Egypt in February, 2020 (Ajisegiri et al., 2020) while the Nigeria Centre for Disease Control (NCDC) confirmed the first positive case of COVID-19 in Nigeria on February 27, 2020 and the second case on March 9, 2020 (NCDC, 2020a; 2020b). Since then, the number of cases has continued to increase sporadically with an estimation of 155,417 confirmed cases while the number of active cases and death were estimated at 20,183 and 1,905 respectively as at February 28, 2021 (NCDC, 2021).

It is interesting to note that the Nigerian government constituted the Coronavirus preparedness group on January 31, 2020 consequent upon the WHO declaration on January 30, 2020. Unfortunately, the country has experienced tremendous increase in the number of COVID-19 cases which has spread across her 36 states in spite of this effort (Amzat et al., 2020). Marbot (2020) further stressed that Nigeria has been identified by WHO as one of the high-risk African countries for rapid spread of COVID-19 due to poor standard of the healthcare system.

Table 1: Confirmed COVID-19 Cases by State

States Affected	No. of Cases (Lab Confirmed)	No. of Cases (on admission)	No. Discharged	No. of Deaths
Lagos	57,337	22	56,889	426
FCT	19,584	3,515	15,913	156
Plateau	9,015	59	8,899	57
Kaduna	8,869	80	8,724	65
Rivers	6,867	106	6,663	98
Oyo	6,824	504	6,204	116
Edo	4,868	79	4,597	192
Ogun	4,611	206	4,356	49
Kano	3,890	28	3,752	110
Ondo	3,162	1,007	2,094	61
Kwara	3,067	204	2,808	55
Delta	2,599	784	1,744	71
Osun	2,512	55	2,405	52
Nasarawa	2,316	1,930	373	13
Enugu	2,221	327	1,865	29
Katsina	2,082	18	2,030	34
Gombe	2,025	3	1,978	44
Ebonyi	1,989	19	1,938	32
Anambra	1,909	64	1,826	19
Akwa Ibom	1,736	441	1,281	14
Abia	1,649	9	1,619	21
Imo	1,639	68	1,535	36

States Affected	No. of Cases (Lab Confirmed)	No. of Cases (on admission)	No. Discharged	No. of Deaths
Bauchi	1,488	204	1,267	17
Borno	1,326	88	1,200	38
Benue	1,188	575	591	22
Adamawa	942	641	270	31
Niger	930	496	417	17
Taraba	910	24	864	22
Ekiti	863	45	807	11
Bayelsa	838	33	779	26
Sokoto	773	4	741	28
Jigawa	511	15	480	16
Kebbi	442	34	392	16
Cross River	357	-1	341	17
Yobe	293	25	259	9
Zamfara	231	2	221	8
Kogi	5	0	3	2

Source: http://covid19.ncdc.gov.ng/

As at 22nd March 2021, 161868 cases have been confirmed, 148125 cases have been discharged and 2030 deaths have been recorded in 36 states and the Federal Capital Territory. Moreover, 131 new confirmed cases were recorded in Nigeria (NCDC, 2021).

Apparently, the effect of the COVID-19 pandemic is overwhelming as social relations have been disrupted in countries around the world and Nigeria is not in any way exempted. Close physical contacts and interactions are becoming difficult since transmission is by contacting

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anyone who has contracted the virus (Amzat et al., 2020). Considering the situation brought by the pandemic and the response measures enforced by the Nigeria authorities, it is no doubt that the economy of the nation has been strained with many imbalances and the education sector having its huge share of the crisis.

The Reality of COVID-19 Pandemic on Higher Education in Nigerian

Undoubtedly, the havoc imposed by the COVID-19 pandemic on Nigerian higher education is manifest. As the virus spreads with increasing number of confirmed cases and deaths, the Nigerian government through the Federal Ministry of Education ordered the indefinite closure of all education institutions in the country on March 19, 2020 as stay-at-home measure was enforced on students at all levels. This was reported to be part of the government's strategy to reduce the spread of the virus (Ogunode et al., 2020). While this remains a good decision, because it will help to protect students from contracting the virus, it could also be marked as the genesis of the negative reality and dilemma that the pandemic posed on Nigerian higher education. This, in Nigeria unlike other climes, is because the school closure exposed the nation's facility deficit to conduct virtual/online learning as alternative to physical classroom learning (Samuel, 2020). Some of notable challenges identified with Nigerian HEIs as a result of the COVID-19 pandemic include:

Insufficient Digital Infrastructures

Of the many challenges posed by COVID-19 on the Nigerian HEIs, Muftahu (2020) noted that developing appropriate response mechanisms to ensure continued delivery of educational services (e.g. teaching and learning) during luck-down period was unprecedented. Now that schools are resumed, HEIs are eager to switch to online or remote teaching and learning to minimize students' access to campuses. However, managements of HEIs are still battling with deficit digital infrastructures in schools, training staff to utilize e-learning tools, online supervision of instruction, students' resistance to online learning and uncertainty of students' access to online learning tools among others (Nganga, Waruru & Nakweya, 2020).

Disruption of Academic Calendar

Disruption of academic calendar is another reality of COVID-19 pandemic on Nigerian HEIs. According to Ogunode et al. (2020), Nigeria joined the list of countries that closed educational institutions. During this period, academic programmes of schools and academic

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progress of students were put on hold. It is disheartening to note that students who were writing examination could not complete it until schools reopened after about one year. This situation is a huge set-back not only for the HEIs but for the students as well.

Learning Interruption

Emanating from disruption of academic calendar is the problem of learning interruption. This, according to Ogunode et al. (2020) is referred to teaching and learning gap. The researchers stressed that teaching and learning in Nigerian HEIs have been distorted due to COVID-19. By implication, students who were disengaged from learning and were probably idle up to a year following the stay-at-home directive could find learning uninteresting now that HEIs have resumed. Samuel (2020) in his own view submitted that there is no guarantee of having all learners back in school after schools reopening because some may have shifted their attention to other ventures they perceived profitable to them than schooling. As regards the use of online mode, learning could also be challenging especially for students who are less technologically inclined. Rao and Giuli (2010) cited in Muftahu (2020) posited that students with poor or lack of internet facilities, poor computer skills and resistance to remote learning could find remote learning a herculean task.

Irregular Power supply

The Nigerian contemporary society is anenviroment where everyday task and activity is predominantly associated with electrical infrastructures. Therefore, uninterrupted power supply becomes imperative. This reality however is yet to be achieved in Nigeria. It is no gainsaying that majority of industries and educational institutions seem to be unproductive because they are suffering from poor and irregular power supply. The magnitude of this problem for Nigerian universities is that teaching and learning activities requiring the use of power are always interrupted (Olayemi, Adamu & Olayemi, 2021). Moreover, many research works and laboratory specimens subjected to experimental activities may eventually produce unreliable results for the reason of power failure. Obviously, the application of virtual learning in universities cannot exist separately without power supply. This is because digital infrastructures are built to coexist with power supply for their proper and continual functioning. For example, a desktop computer needs to be connected to a power source

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before it can be used. Even for a laptop computer, there would be need for power connection after a while when its battery is exhausted.

It is worrisome to mention that the experience of many Nigerian university students with power supply is devastating. Majority of the classrooms are in a despicable state with poor electrical fittings that doesn't allow for power supply. As if that is not enough, power failure is also experienced by students in their various hostels and residences, thereby restricting them to study under unpalatable conditions. One may therefore need to ask how effective virtual learning would survive with this kind of threats, bearing in mind the necessity of power supply for its proper functioning. Thus, it is fundamental to note that power supply is a crucial factor determining the readiness of student for virtual learning in Nigerian universities.

Lecturers' inadequate digital knowledge

It was undoubted that the emergence of COVID-19 pandemic made digital mode of teaching and learning an indispensable tool for HEIs all across the globe. However, the situation in Nigeria shows that majority of lecturers are inadequate in their knowledge and use of digital infrastructure to facilitate learning (Tor & Malgwi, 2020). This is because physical classroom teaching has been observed to be the predominant means of teaching for majority of Nigerian lecturers. As a result, facilitating remote learning through digital facilities as an alternative to the physical classroom becomes a challenge for them particularly during the COVID-19 pandemic.

It is no gainsaying that the impact of COVID-19 is alarming and undesirable. Ogunode et al. (2020) additively identified reduction in international education, cancelation of local and international conferences, and loss of HEIs workforce as part of malevolent effects of the pandemic on Nigerian higher education. However, with this current reality comes the need to embrace digitalization of education in a sustainable manner to ensure continued delivery of teaching, learning and other educational services without any obstruction even after the COVID-19 pandemic.

Digitalization of Higher Education in Nigeria

Higher education remains the top of developmental tools because of its immense national contribution to human and economic development. Therefore, African governments and

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Nigeria in particular, need tremendous efforts towards full incorporation and sustainability of digital content into education curriculum especially at higher level. This is to make it flexible to all and sundry to enjoy accessibility anytime, anywhere. There is no doubt that digitalization plays a vital role in restructuring education especially at higher education level. It brings considerable improvement and invigoration to teaching, research and learning by enhancing teacher-student interaction through multiple channels of communication. For these reasons, sustainability of digitalization in higher education need to be given prominent attention so that generation yet unborn will enjoy it without any form of barrier.

Imhonopi and Urim (2012) conceptualize digitalization as modern technological facilities that enable gathering, processing, transmitting and storing information for future references. It comprises hardware and software components that can be put together for heterogeneous use that connects individuals and institutions over wide range of different geopolitical locations. This means that the use of digital facilities for teaching, learning and research will provide easier interaction between higher education teachers and learners regardless of the distance. Garai (2006) believes that digitalization covers Internet service provision, telecommunications equipment and services, information technology equipment and services, media and broadcasting, libraries and documentation centres, commercial information providers, network-based information services, e-teaching, e-learning and other related information and communication activities. Patrick et al. (2014) see digitalization as technological facilities that are capable of processing different facets of information (voice, video, audio, text and data) and facilitate different forms of communication means among senders and receivers.

Digitalisation stands to offer immense benefits to higher education in Nigeria especially now that the COVID-19 pandemic has distorted activities in schools at all levels. Imhonopi and Urim (2012) identified e-learning as a digitalization tool that makes learning relatively easier within and outside the classrooms through audio and video clips, webcasting, and audio-visual materials. Others are teleconferencing (text-based, video and audio conferencing). The researcher further discussed e-teaching as a benefit of digitalization that enables lecturers-students' interaction without meeting physically. Examples of such tools are zoom, google classroom and many others. Inclusive to these is e-administration of HEIs which allows online medium of admission processes, payments, registration and publishing

of information for stakeholders to mention a few. Other benefits are online peer review and collaborative research which enable Nigerian researchers to team up with their colleagues in other parts of the world. From the foregoing, digitalization is irrefutably beneficial to higher education in Nigeria.

Sustainable Digitalisation of Higher Education in Nigeria: Some Suggestions

No doubt that the nationwide school closure had a huge impact on higher education. Therefore, the Nigerian HEIs are expected to put appropriate measures in place to mitigate the impacts. This paper adopts the some of the suggestions of Qiu et al. (2017) on the measures needed to put in place for HEIs to sustain digitalization of academic activities in the country.

Provision of adequate digital infrastructures

Digital infrastructures are very essential for digitalisation of higher education and learning. These infrastructures such as computers, internet and learning application software among others, should be adequately provided in order to ensure sustainability of digital learning in HEIs. Achieving this may require adjusting the curriculum of higher education to incorporate digital contents into every discipline and subject areas. This implies that availability of digital facilities would be a fundamental criterion for accreditation of HEIs while adequate digital knowledge would be considered essential for recruiting HEIs staff. This should be done with a mandate to make higher education flexible and accessible to all and sundry wherever and at any anytime.

In addition, students with special needs should not be left out. Learning technological facilities for them based on their peculiarity because they are more likely to be disadvantaged at accessing e-learning. As a result, these set of learners need assistive technologies, which can improve communication and enhance learning for individuals with specific disabilities.

Guaranteed access to digital infrastructures

Sequel to provision of digital infrastructures for sustainable digitalisation of learning is guaranteed access to the infrastructures. It is instructive to note that digital infrastructures can only be used for teaching and learning purpose if access is guaranteed for both students and staff. Of the basic digital amenities required for digitalization of academic activities at higher education level is quality internet facility. Access to quality internet, computers and other

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digital resources is a right step in the right direction which can promote sustainable digitalisation of learning. As a result, educational challenges such as disruption of academic calendar and learning interruption as witnessed by Nigerian HEIs at the hit of the COVID-19 pandemic could be resolved.

As part of effort to guarantee access to digital infrastructures is to ensure that disadvantaged students are catered for. Although, evidence has shown that disadvantaged students are less likely to have access to digital facilities (Doorly, 2018). Therefore, governments should increase access to digital facilities by reducing the costs of internet connectivity and computers (laptops, or tablets) for disadvantaged households so that students from such background will not be left out.

Regular power supply

Provision of uninterrupted power supply is another pivotal factor to be considered in order to ensure sustainable digitalisation of higher education in Nigeria. Effective use of digital facilities for learning at higher levels is a function of stable power supply. While the government is making all effort to providing stable power, it is important for Nigerian HEIs to complement the government by inventing innovations that will generate power through their various research activities and projects, thereby providing solutions to the problem of irregular power supply in the institutions and their immediate communities as well.

Support for lecturers

Lecturers are important human component of the teaching-learning processes at higher education level. As such, they need to be given adequate support in terms of training and workshop attendance. This will enable them to quickly adapt to the requirements for digital needs and be able to communicate online with students through effective use of Microsoft, Google and other educational tools.

Conclusion

COVID-19 pandemic has radically changed the narratives in the global higher education landscape. Traditional teaching methods have been rendered useless and unfortunately, the Nigeria HEIs are among the worst hit due to lack of digital infrastructure to seamlessly migrate to the virtual learning space. This does not exonerate higher education teachers and

students alike who have also been trapped in this web. The need to be viral and dynamic in rendering higher education services should form major focus of higher education managers and planners. This can be achieved through long-term policies that will mainstream e-learning processes into teaching and learning in Nigeria, as suggested. This is to ensure sustained post COVID-19 relevance. Furthermore, practitioners as well as stakeholders in the Nigerian higher education sub-sector should develop new skill sets tailored towards redirecting learning in a virtual environment.

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