POST COVID-19 AND DIGITALIZATION OF UNIVERSITY LECTURERS IN NIGERIA

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ABSTRACT

This study investigated post covid-19 pandemic and the impact of digitalization on university lecturers in Nigeria. The study made use of the descriptive survey research design. Two research questions were raised for the study. The target population of the study comprised of all Science Education lecturers in Nigerian Universities. The sample size used comprised of 300 lecturers which comprised of 183 male and 117 female from the six geopolitical zones in Nigeria. The research instrument used for data collection was a 32-item structured questionnaire rated on a 4-pointLikert scale. The responses of the respondents were presented in simple statistical table and analyzed using Mean ($\bar{x}$) and Standard Deviation. In taking decision on the research questions, mean scores for 2.50 and above were deemed as agreed, accepted or positive while those below 2.50 were regarded as negative and unaccepted/disagreed responses. The findings of the study revealed the impact of digital semester on lecturers as well as the availability of digital resources in Nigerian Universities. Based on the findings of the study, it was recommended that lecturers and students should incline themselves in the innovative trends of digital teaching and learning respectively. Also, government and other stakeholders should support teachers/lecturers, students and communities by adequately providing digital tools for teaching and learning in the post covid-19 era.

Keywords: Post covid-19, covid-19, digitalization, lecturers

INTRODUCTION

It has been mythically predicted that the world changes in every two decades. The educational landscape of today's world is undergoing radical transformation with many changes that have been accelerated with the covid-19 pandemic. The SARS-CoV-2 (covid-19 [coronavirus disease 2019]) pandemic has shown us that the right to education needs to be flexible and adapted to different contexts and to the needs of changing societies. The covid-19 pandemic has created the largest disruption of education systems in history (Aiyedun&Ogunode, 2020), affecting nearly 1.6 billion learners in more than 190 countries and all continents. Closures of schools and other learning spaces have impacted 94 per cent of the world's student population, up to 99 per cent in low and lower-middle income countries (United Nations, 2020). covid-19 makes us ask the purpose of schooling "why do we learn in the four

walls of a classroom" and invites us to reassess what sort of skills and capabilities we are really expecting education and learning to offer. An updating and broadening of the right to education has clearly become necessary.

With the covid-19 pandemic, most higher education institutions closed campuses, cancelled all physical class meetings, and moved to online teaching. Indeed, several recent studies (Aucejo, French, Ugalde, Araya & Zafar, 2020; Rodríguez-Planas 2020; Aiyedun&Ogunode, 2020), have found that the covid-19 pandemic has adversely affected academic *expectations* of college lower-income students as they are more prone to experience online-learning challenges, consider dropping classes, and delaying graduation than their higher-income peers.

Majority of school districts provided some remote instruction during the last months of the school year (Lake &Dusseault, 2020a). The use of digital technologies such as audio-virtual and animation for learning has generated interest for a number of years (**Ojelade, Aregbesola, Ekele&Aiyedun, 2020; Aiyedun, 2020**). It is one thing to employ digital tools in teachers' pedagogical work with students as stated by Aiyedun (2020) on the importance of animation pedagogy, it is another to make them available to lecturers for teaching and students for learning.

The availability of digital facilities in tertiary schools is to ascertain if ICT tools are adequate enough in quantity and good enough in quality for the purpose of effective teaching and learning to take place (Olatunde-Aiyedun&Ogunode, 2021). In the opinion of Ngwu (2014), most digital resources are not adequately available in schools. Ngwu stressed that even if teachers are well trained and willing to impart knowledge to the students, they are incapacitated to do so by the lack or inadequacy of the technological equipment and facilities. Grabe and Grabe (2011) disagreed with Ngwu by stating that most lecturers are not performing this task probably because of their analogue nature.

It is against this backdrop that the researchers examined the post covid-19 pandemic and the impact of digitalization on university lecturers in Nigeria.

Purpose of the Study

The intent of this study is to better understand and project how covid-19-based school closures has affected academic staff (lecturers) performance during the 2019–2020 and 2020–2021 school year respectively. Thus, the purpose of this study is to measure the effects, consequences of post covid-19 and the impact of digitalization on students' academic achievement. Specifically, the objectives of the study aimed to analyze the:

i.   overall effect of post covid-19 pandemic on educational system in Nigeria

ii.   impact of digital semester on lecturers' job performance in the Nigerian Universities

iii.   availability of digital resources during the post covid-19 era in the Nigerian Universities

Research Questions

This research investigated the following three questions:

1) What is the overall effect of post covid-19 pandemic on educational system in Nigeria?

2) What is the impact of digital semester on lecturers' job performance in the Nigerian Universities?

3) To what extent are digital resources available in the post covid-19 era in the Nigerian Universities?

Review of Related Literature

Jang and Weller, based on the United Nations (2018) anticipated that technology would leverage inclusive and alternative education of marginalized and disadvantaged groups by benefitting from new ways of learning and participation.

According to a national survey of teachers conducted by Education Week (Kurtz, 2020), as of the first week of April, only 39% of teachers often communicated with their students, and most teacher–student interaction took place via email. In Nigeria, which is rather a developing nation unlike the United State of America, teachers estimated that their students spent half as much time on learning as they did before the covid-19 school closures (Gewertz, 2020).

Additional evidence showed the poll analyzed by Education Trust (2020), even when teachers made themselves and their instructional materials available online, many students lacked the means to access online materials from home. Nearly 50% of low-income families and 42% of average families lacked sufficient ICT devices at home (Lake &Dusseault, 2020). Despite the intervention of many administrative leaders and educators, students and their families took the responsibilities of ensuring that quality education of teaching and learning continued online during the lockdown and school closure (Aiyedun, et. al., 2020).

Other researchers such as Gonzalez, Rubia, Hincz, Comas-Lopez, Subirats, Fort and Sacha (2020) conducted a field experiment using the sample data of 450 students across three different subjects and different degrees of higher education in the Autonomous University of Madrid to study the effects of COVID-19 confinement in students' performance. A working paper by Loton, Parker, Stein, &Gauci (2020) studied remote learning university student satisfaction and performance during Covid-19 pandemic. They found a small, but significant decrease in satisfaction and an increase in marks. However, the effects found are very week and they conclude a successful initial transition to remote learning. Furthermore, a recent report by Boggiano, Lattanzi, &McCoole (2020) offers university student perspectives regarding a transition to remote studies due to covid-19.

A comparative study across different universities in New England, including Worcester Polytechnic Institute, suggests that the student perception on the quality of education decreased in the online environment; furthermore, there was a smoother shift for schools which provided adequate resources for both students and academic staff, as well as more time for the transition. Boggiano, Lattanzi, &McCoole (2020) also mention the student's concern about future uncertainty, as many have lost internship and job opportunities to a pandemic. Some of them were shortened, pushed back, or cancelled altogether, which could potentially have longer-term impacts on the students' careers and future success.

Teachers are encouraged to use multimedia teaching strategies and trending innovative instructional materials and designs in teaching and learning rather than using ready-made materials and content which demotes quality education and distorts the work of teachers and students. We must ensure that any digital transition is not just an effort pushed by technology companies but that teachers/lecturers, students, governments, civil society representatives and privacy advocates are also represented and shaped for desired transformations (Olatunde-Aiyedun, et. al., 2021).

In contrast with the above previous studies on covid-19 pandemic and educational system in Nigeria, this study aimed to fill the gap based on the after effect of the crisis as well as differs in investigation of digital literacy and available tools for university lecturers in the country (Nigeria) covered.

METHODOLOGY

This study made use of the descriptive survey research design. Two research questions were raised for the study. The target population of the study comprised of all University Science Education lecturers in Nigeria. The sample size used comprised of 300 lecturers which comprised of 183 male and 117 female from the six geopolitical zones in Nigeria. The research instrument used for data collection was a 32-item structured questionnaire rated on a 4-point Likert scale, with response options of Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD) as well as Adequately Available (AA); Available (A); Neutral (N); and Not Available (NA). The responses of the respondents were presented

in simple statistical table and analysed using Mean ($\overline{x}$) and Standard Deviation. In taking decision on the research questions, mean scores for 2.50 and above were deemed as agreed, accepted or positive while those below 2.50 were regarded as negative and unaccepted/disagreed responses.

Result and Analysis

TABLE 1. EFFECT OF POST COVID-19 ON EDUCATIONAL SYSTEM

S/N	ITEMS	Mean ($\overline{x}$)	Std. deviation	Decision
1	Covid-19 will have a negative effect on the education system in Nigeria	2.56	1.131	Agreed
2	Contact hours were affected as a result of early closure of schools across the Nation	3.08	1.567	Agreed
3	Majority of schools in Nigeria lack e-learning facilities to enable teachers interact with their students	2.96	1.664	Agreed
4	Majority of students are unable to access it as a result of epileptic power supply	2.78	1.299	Agreed
5	it destabilizes the school semester and academic session	3.15	1.115	Agreed
6	Mass failure of undergraduate students could be attributed to covid-19 school closure/lockdown	2.07	0.948	Disagreed

Sectional Mean/ Std. Deviation = 2.77/   1.29

Source: Survey, 2021

Table 1 ascertained the effect of post covid-19 on educational system in Nigeria. Data in item 1-5 agreed to the effects of post covid-19 era on educational system in Nigeria while lecturers disagreed with item No. 6 which denotes that mass failure of undergraduate students was as a result of covid-19 school closure.

TABLE 2. IMPACT OF DIGITAL SEMESTER ON LECTURERS' JOB PERFORMANCE

S/N	ITEMS	Mean ($\overline{x}$)	Std. D.	Decision
1	I am getting familiar with new digitalized teaching methods and instructional strategies	2.49	0.567	Disagreed
2	The lack of e-learning facilities in my school affect my job	2.84	1.439	Agreed
3	instability and consistent power failure in my school affect my job	2.67	1.301	Agreed
4	majority of the students are unable to have online access because of lack of data subscription	2.92	1.335	Agreed
5	I conduct alternatives to practical classes	2.88	1.189	Agreed
6	The present mass failure in science subjects is as a result of the instructional materials used for teaching	2.81	1.365	Agreed
7	I am worried that I cannot use multimedia properly in learning	2.72	1.564	Agreed
8	I am worried that the media I use is not in accordance with the indicators and learning purpose	2.01	1.266	Disagreed
9	I am unable to make learning media that makes it easy for students to understand science subjects	2.07	1.139	Disagreed
10	I feel anxious about preparing the media that will be used before teaching	2.88	1.189	Agreed
11	I am more comfortable when using print media (books			

S/N	Items	Mean	Std.	Decision
	modules/lecture notes) to teach	3.15	1.115	Agreed
12	I am worried when I have to determine the media needed for each science topic	2.09	1.250	Disagreed
13	I feel anxious that students cannot understand the contents of the media that I use	2.83	1.456	Agreed
14	I feel worried because I'm not sure whether the media I use is enough or not	2.85	1.786	Agreed
15	I feel nervous because I can't understand the media that I use clearly	2.44	0.821	Disagreed
16	I feel anxious when I have to use media that is integrated with ICT	2.90	1.518	Agreed

Sectional Mean/ Std. Deviation = 2.70 /   1.27

Source: Survey, 2021

Table 2 ascertained the Impact of digital semester on lecturers' job performance in Nigerian Universities. Data in item 2-7, 10-11, 13-14, and 16 agreed to the impact of digital semester on lecturers' job performance while data in item 1, 8-9, 12, and 15 Disagree to the impact of digital semester on lecturers' job performance in the Nigerian Universities.

TABLE 3. AVAILABILITY OF DIGITAL RESOURCES DURING THE POST COVID-19 ERA IN THE NIGERIAN UNIVERSITIES

S/N	ITEMS	Mean $(\overline{x})$	Std. deviation	Decision
1	Desktop/computers/laptops/ Computer laboratory	2.56	1.131	Available
2	Internet facilities/connectivity	2.51	1.292	Available
3	Projectors/slide projectors/ PowerPoint multimedia projector/ Overhead projector/ opaque projector/projection screen	2.92	1.771	Available
4	ICT resource centre/ School cyber café	2.78	1.299	Available
5	Multimedia classrooms (Audi-Visual centres)	2.02	1.321	Not Available
6	Scanner/printer/photocopy	3.15	1.115	Available
7	Digital library	2.25	0.228	Not Available
8	Satellite dish for global information	2.13	1.156	Not Available
9	Close Circuit Television (CCTV)	2.05	1.194	Not Available
10	Examination Scoring Machine (ESM)	2.04	1.001	Not Available

Sectional Mean/ Std. Deviation = 2.44/ 1.15

Source: Survey, 2021

Table 3 ascertained the availability of ICT resources during the post covid-19 era in the Nigerian Universities. Data in item 1-4, and 6 revealed that there is availability of Desktop/computers/laptops/ Computer laboratory; Internet facilities/connectivity; Projectors/slide projectors/ PowerPoint multimedia projector/ Overhead projector/ opaque projector/projection screen; ICT resource centre/ School cyber café; and Scanner/printer/photocopy while data in items 5, 7-10 revealed that ICT rescouces such as Multimedia classrooms (Audi-Visual centres); Digital library; Satellite dish for global information; Close Circuit Television (CCTV); and Examination Scoring Machine (ESM) are not available.

DISCUSSION OF FINDINGS

The results of this study showed the effect of post covid-19 on academic staff of the Nigerian Universitiies. It also showed the impact of digital semester on lecturers as well as the availability of digital resources in Nigerian Universities.

From the findings in Tables 1, it was significantly proven the effects of post covid-19 era on educational system in Nigeria. Many higher education in Nigeria lack e-learning facilities to enable teachers interact with their students for effective teaching and learning during the covid-19 and post covid-19 era. Various digital online platforms are being adopted to replace the physical classroom since the historic school closure/ lockdown as a result of covid19 pandemic (Aiyedun&Ogunode, 2021).

The findings in Tables 2, revealed that covid-19 has both negative and positive impact on the educational system in Nigeria. The negative impact was majorly as a result of the covid-19 lockdown and closure of schools across the Nation thereby leading to a necessity for digital literacy. Majority of the schools in Nigeria lack e-learning facilities to enable lecturers interact with their students at such a time as this. Even the few Universities that have such facilities, majority of the students are unable to access it as a result of epileptic power supply and financial constraint in data subscription. This is in line with the results by Aiyedun, et. al. (2021) which showed that lecturers are getting prepared to teach with new instructional strategies in order to minimize the impact, covid-19 may pose on undergraduate students. However, lecturers who took part in this study expressed concern about the lack of e-learning facilities in their institutions and they also complained about instability and consistent power failure in the country. They acknowledged that stable electricity in Nigeria will facilitate e-learning thereby allowing lecturers continue their academic work and even conduct alternatives to practical classes. They believe this would yield positive transformation in the post covid-19 era where uncertainties abound.

Research question 3 revealed that there is need for adequate availability of digital resources during the post covid-19 era in the Nigerian Universities. Thisresult is in line with the opinion of Egomo, Enyi and Tah (2012) who revealed that the availability of digital resources for effect instructional delivery is relatively low, except for few ICT tools such as Scanner/printer/photocopy; Desktop/computers/laptops/Computer laboratory; ICT/café centres and projectors. They further stated that due to inadequate digital facilities, quality of graduates produced from Nigerian universities are relatively low.

CONCLUSION AND RECOMMENDATIONS

From the findings of the study, it can be concluded that the post covid-19 pandemic have a positive and negative narrative on the educational system in Nigeria but it is encouraged to embrace optimism when handling sensitive topic as this. Covid-19 has reminded humanity that uncertainty also contains great potentials and puts lie to environmental determinism (Aiyedun, 2021). As a result of the pandemic, education has change profoundly.

The covid-19 crisis has exposed the fact that innovation and creativity are broadly distributed globally. This issues, challenges and way forward of covid-19 pandemic on educational system in Nigeria as revealed by Ogunode and Aiyedun (2020) is a collective effort of the Nigerian government, educators, parents and communities.

Based on the findings of this study, the following recommendations are put forward:

i.   Since digitalization (ICT tools) has come to stay, lecturers and students are encouraged to acclimatize themselves in the innovative trends of digital teaching and learning respectively.

ii. Government and other stakeholders should support teachers/lecturers, students and communities by adequately providing digital tools for teaching and learning.

iii. Lecturers and students should be equipped with free Wi-Fi or data subscription to aid effective online teaching or e-learning.

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