

IMPACT OF COVID-19 PANDEMIC AND DEVELOPMENT OF LECTURERS' E-LEARNING EXPERIENCES:A GUIDE TO EDUCATIONAL MANAGERS.

Ogogor, Tochukwu Ngozi PhD

Department of Educational Foundations, Federal College of Education(T), Asaba,

Abstract

The importance of e-learning was already being emphasized in tertiary institutions in Nigeria before the emergence of COVID-19. However, not much attention is paid by lecturers in practically exploring the components of e-learning until the outbreak of the COVID-19 which made it mandatory for lecturers to seek avenue to disseminate information and knowledge to students in keeping with the compulsory social distancing. The study therefore assessed the extent of the effect of COVID-19 pandemic on the development of lecturers' e-learning experiences using lecturers of tertiary institutions in Delta State as respondents. Three research questions guided the study. The study employed descriptive survey design. Population of the study comprised of three thousand, two hundred and thirty-two (3,232) lecturers of various faculties and departments in the eleven (11) higher institutions, made up of three (3) universities, four (4) polytechnics and four (4) colleges of education in Delta state. Sample size of this study constituted three hundred and twenty-three (323) lecturers representing 10% of the entire population using proportionate stratified random sampling technique. A twenty (20) items questionnaire titled: COVID-19 and Lecturers' e-learning development "CLED" was used for data collection. Both validity and reliability of the research instrument were established. Three hundred and five (305) questionnaires were retrieved and analyzed using mean scores rated at 2.50 and above as the benchmark for acceptance. The findings included that COVID-19 merely sensitized and awakened the interest of lecturers in e-learning but revealed that most lecturers' usage of many applications of e-learning is still to a low extent and lecturers still face many challenges in developing their e-learning. The study therefore recommended among other things that; Educational planners and managers should endeavour to provide all the needed facilities to quail the challenges of e-learning by lecturers who would also need to attend workshops in e-learning and hold online lectures with students to improve themselves.

Keywords: COVID-19 Pandemic, lecturers and e-learning.

Introduction

COVID-19 or Coronavirus as named by Chinese researchers is a highly transmittable and pathogenic disease believed to have emerged from Wuhan in China in 2019 and by 2020, it has spread rapidly through the continent. (Shereem, Khan & Kazmi, 2020). For a long period of almost one year, no promising clinical treatment or prevention strategy was developed against this deadly human virus all over the world except to adopt social distancing. As a result, there was a general social lockdown of all activities to prevent the spread of the disease. All facets of the global economy faced the impact resulting from a sudden economic recession. Horesh and Brown (2020) highlighted the disruption caused by COVID-19 pandemic to include: closure of schools, reorganization of hospital services and everyday life, lockdown of activities, life of isolation, social distancing and quarantine in

extreme cases. During this period, education was nearly grounded to a halt. Tertiary institutions either closed, postponed or cancelled all campus activities to minimize gatherings and hence decrease the transmission of virus. Due to the suspension of classroom teaching in many colleges and universities, a switch to online teaching became imperative. In line with this, the lecturers of tertiary institutions were prompted to adopt this as a means to ensure that their students are not left without studying.

Lecturers are teachers and educators who impart knowledge to students in tertiary institutions. Ogor and Chine(2017) portrayed lecturers as custodians of knowledge in tertiary institutions. They must have excelled in formal education in their different fields which equip them to impart same to their students. Lecturers are dedicated to continuing education throughout their working lives, hence, they search out and create means of moving education forward. They make researches and write papers. They are not just teachers but academic leaders and knowledge boosters. So, during COVID-19, when social distancing became mandatory that it nearly stagnated the education sector, lecturers took up the challenge and resorted to e-learning.to keep abreast of the situation.

E-learning is electronic learning. It is a form of learning that involves the use of electronic technologies to access education at all levels. Akugizibe and Young (2020) posited that e-learning is the use of diverse kinds of Information and Communication Technology (ICT) and electronic devices in teaching and learning. It is also the use of network technologies to create, foster, deliver and facilitate learning everywhere and anywhere. It takes place online through the use of internet and technological devices, whether mobile or not, with synchronous or asynchronous connection (Antonio, Immaculado & Pilar, 2020).In addition, Onochie (2015) noted that e-learning involves the use of digital collaboration, satellite broadcasting, CD ROMS, video, audio conferencing, mobile technology, interactive TV and Web based technology. E- learning is of great importance to education system especially during COVID-19 pandemic. Adetona, Ogunyami and Oduntan (2021) enumerated some of its' importance during COVID-19 to include: strengthening teaching and learning, as it provides powerful resources and services for students and teachers, allowing for networking among students and teachers to facilitate exchange of ideas, promoting the development of education and quality instruction. Above all, during COVID-19, it is an alternative way to minimize the contact between students and lecturers and among students themselves. However, for e-learning to be adopted effectively, one must possess the following e-learning competencies as enumerated by Osamudiamen (2017):

Productivity

- Produce and manage learning documents
- Analyze quantitative data
- Organize information graphically

Research

- Use effective online strategies
- Evaluate and compare online information and sources
- Save and cite online information and sources

Communication

- Communicate using digital tools
- Collaborate online for learning

- Publish learning resources online

Media

- Differentiate instruction with digital media
- Capture and edit images, audio and video
- Produce digital multimedia educational experiences

Presentation

- Create effective digital presentations
- Deliver digital multimedia presentations
- Employ new media devices for learning

The above e-learning competencies are necessary for lecturers' proficiency in their e-learning. Adetona, Ogunyami and Oduntan added that lecturers also needed these efficiencies in the use of: wireless networks, software, excel, google searches, printers, scanners, projectors, power point, desktop and laptops. However, during COVID-19, which was a sudden occurrence, lecturers' switch to e-learning was impromptu though e-learning was already being emphasized in tertiary institutions with only few lecturers practicing it (Chukwuma-Ezugoh, Ovri & Onajite, 2017). So, COVID-19 aroused the interest of lecturers in e-learning since it is the only option left for them to communicate with their students during that era. In view of this, the researcher seeks to ascertain the extent of impact COVID-19 had on lecturers' development in e-learning. This finding will act as a guide to management on where to begin to assist lecturers for further e-learning development.

Theoretical framework

The theory of change is considered relevant in this study. it is difficult to trace precisely when the theory of change emerged but it was credited to late 1950s theorists; Huel Chen, Peter Rossi, Michael Quinn and Carol Weiss. This theory believes that a given intervention or set of interventions in a system can trigger up specific development and change in the system. The theory suggests identifying the intervention, the change that occur, what it does and moves for initiative to bridge the gap between what has been and the change. In doing this the theory recognizes the long-term goals and all the conditions that must be in place for the goals to be achieved before mapping out a new plan or activity for better achievement of the goal. This theory helps to understand and assess the impact of change on institutional development by developing various guides and supports necessary for implementation of change.

Therefore, the application of this system corroborates this study on COVID-19 pandemic and the development of lecturers' e-learning ability. This is because, COVID-19 is seen here as an intervention obstructing the educational system that also triggered up changes in the educational system. Following this theory therefore, management seeks initiatives, guides and supports to build on e-learning experiences of lecturers during COVID 19 which will further develop them.

Statement of problem

The COVID-19 pandemic in Nigeria brought a social lockdown that affected all facets of life including education. The unexpected closure of educational institution as a result of the COVID-19 pandemic prompted educational authorities including lecturers to explore e-learning to ensure that students are not left out without studying and to obey the mandatory social distancing. This seems to have helped expose most lecturers to e-learning. However,

observation seems to suggest that lecturers' e-learning experience is still poor. Again, since the post COVID-19 era, lecturers' interest in e-learning seem to have dwindled; online lectures have stopped in most cases, and other educational interactions with students seem to have gone back to traditional method of only classroom. This will likely affect whatever effect COVID-19 had on lecturers' e-learning development. The researcher therefore embarked on this study to find out the extent of the effect of COVID-19 pandemic on lecturers' development of e-learning so as to ascertain where management would help to further develop their experiences or resolve their challenges.

Purpose of the Study

The main purpose of the study was to investigate the extent of the impact of COVID-19 pandemic on lecturers' e-learning development in Delta State, Nigeria. Specifically, the study sought to:

1. Find out the extent of the effect of COVID-19 pandemic on lecturers' interest in the use of e-learning facilities and gadgets in tertiary institutions of Delta State.
2. Determine the extent of the effect of COVID 19 pandemic on lecturers' development in online instruction and communication in tertiary institutions in Delta State, Nigeria?
3. Ascertain the extent of the effect of COVID 19 pandemic on lecturers' e-learning challenges in tertiary institutions in Delta State, Nigeria.

Research Questions

1. What is the extent of the effect of COVID-19 pandemic on lecturers' interest in the use of e-learning facilities and gadgets in tertiary institutions of Delta State, Nigeria?
2. What is the extent of the effect of COVID 19 pandemic on lecturers' development in online instruction in tertiary institutions and communication in Delta State, Nigeria?
3. What is the extent of effect of COVID 19 pandemic on lecturers' e-learning challenges in tertiary institutions in Delta State, Nigeria?

Methodology

The design adopted for the study was descriptive survey design. A sample of the large population was studied, and the data analyzed without manipulation. The population of the study was three thousand, two hundred and thirty-two (3,232) lecturers of various faculties and departments in the eleven (11) higher institutions, made up of three (3) universities, four (4) polytechnics and four (4) colleges of education in Delta state. The choice of this population is because it is the lecturers' e-learning development that is being studied. The sample size for the study was three hundred and twenty-three (323) representing 10% of the entire population because the population was in a few thousands. The proportionate stratified random sampling technique was used to draw the 10% from the various institutions to ensure that the sampling is representative of universities, polytechnics and colleges of education. The instrument used for data collection was a twenty (20) items questionnaire titled "COVID-19 and Lecturers' E-learning Development" (CLED). The instrument was developed and structured by the researchers. The items were divided into three clusters drawn from the research questions and based on four (4) point scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE). The instrument was validated by two experts from Department of Measurement and evaluation, Federal college of Education Technical, Asaba. The reliability index was determined using Cronbach Alpha statistics which showed an index of 0.84 signifying that the instrument was reliable and

appropriate for use because the correlational coefficient is up to and above 0.60. the instrument was administered with the help of two trained research assistants. Out of the 323 instruments distributed, three hundred and five (305) were retrieved and analyzed using mean and standard deviation. The benchmark for decision was that items with mean scores of 2.50 and above were accepted while items below mean score of 2.50 were not accepted. The mean value was derived by the addition of scale values and dividing the sum by the number of scale options thus:

$$4+3+2+1 = 10 = 2.50$$

$$\frac{\text{-----}}{4} \quad \frac{\text{---}}{4}$$

The value range of extent is as follows:

$$\text{VHE} = 3.50-4.00$$

$$\text{HE} = 2.50-3.49$$

$$\text{LE} = 1.50-2.49$$

$$\text{VLE} = 1.00-1.49$$

Data Analyses, Presentation and Discussion of Findings

Research question 1: What is the extent of the effect of COVID-19 pandemic on lecturers' interest in the use of e-learning facilities and gadgets in tertiary institutions of Delta State, Nigeria?

Table1: The extent of the effect of COVID-19 pandemic on lecturers' interest in the use of e-learning facilities and gadgets in tertiary institutions of Delta State.

S/N	COVID-19 Pandemic helped me to be exposed to:	MEAN	DECISION
1	Software	3.00	HE
2	Projectors	2.35	LE
3	Desktop/Laptop	3.20	HE
4	Wireless network	2.93	HE
5	Power point	2.47	LE
6	Google searches	3.25	HE
7	Printers and Scanners	2.84	HE
8	Excel	2.34	LE
	Grand Mean 2.79		

The results from this table showed that items 2, 5, and 8 were rated negatively to a low extent with mean scores of 2.35, 2.47 and 2.34, signifying that the respondents' exposure to projectors, power point and excel due to COVID-19 was to a low extent. While items 1, 3, 4, 6 and 7 with mean scores of 3.00, 3.20, 2.93, 3.25 and 2.84 showed that lecturers exposure to software, desktop/laptop, wireless networks, google searches, printers and scanners due to

COVID-19 pandemic was to a high extent. The grand mean of 2.79 signified that COVID-19 affected lecturers' interest in e-learning to a high extent.

Research question 2: What is the extent of the effect of COVID 19 pandemic on lecturers' development in online instruction and communication in tertiary institutions in Delta State, Nigeria?

Table 2: The extent of the effect of COVID 19 pandemic on lecturers' development in online instruction and communication in tertiary institutions in Delta State, Nigeria?

S/N	COVID-19 experience helped me to:	MEAN	DECISION
9	Use projectors to deliver lectures	2.21	LE
10	Use power point for instruction	2.25	LE
11	Give and collect students' assignment online	2.17	LE
12	Hold meetings online with colleagues	2.01	LE
13	Teach through wireless communication networks ;egWhatsApp	2.39	LE
14	Compute students' result online	1.53	LE
15	Transfer files to colleagues and others	1.67	LE
	Grand Mean 2.03		

In table 2, the acceptance of all the items; 9-15, with mean scores of 2.21, 2.25, 2.17, 2.48, 2.39, 1.53 and 1.67 was to a low extent. All the items with the grand mean of 2.03 showed that COVID-19s' effect on lecturers' development in online instruction and communication was to a low extent. The result signified that the effect of COVID-19 on lecturers' use of projector and power point to deliver instruction; communication and assessment of students online and transfer of files online were all to a low extent.

Research question 3: What is the extent of effect of COVID 19 pandemic on lecturers' e-learning challenges in tertiary institutions in Delta State, Nigeria?

Table 3: The extent of the effect of COVID 19 pandemic on lecturers' e-learning challenges in tertiary institutions in Delta State, Nigeria

S/N	After COVID-19 experience, the following challenges I encounter in e-learning were over:	MEAN	DECISION
15	Inadequate e-learning facilities	1.76	LE
16	Poor connectivity and networking	2.05	LE
17	Lack of financial support	1.90	LE
18	Ignorance of most skills needed in e-learning	1.87	LE

19	Lack of personal interest	3.15	HE
20	Insufficient training on e-learning	2.33	LE
Grand Mean		2.17	

From the result on table 3, all the items; 15, 16, 17, 18 and 20, except item 19 were accepted to a low extent by respondents with mean scores of 1.76, 2.05, 1.90, 1.87 and 2.33. while respondents' acceptance to item 19 with mean score of 3.15 was to a high extent. This is an indication that the challenges of e-learning faced by lecturers' still remained after COVID-19 pandemic, hence the response that the problems were over was to a low extent. This was further confirmed by the grand mean of 2.17 which is below the bench mark of 2.50. However, the mean score of item 19 indicated that COVID -19 ended the problem of lack of interest of lecturers in e-learning.

Discussions

The findings of research question one showed that COVID-19 affected lecturers' interest in e-learning to a high extent. The findings revealed that: COVID-19 pandemic aroused the interest of lecturers in the use of online packages and facilities like: software, desktop/laptop, wireless networks, google searches, printers and scanners to a high extent and the use of projectors, power points and excel to a low extent. What this means is that COVID-19 aroused the interest of lecturers to online activities more than before. These findings fall in line with the findings of Abdelsalam, Ebitisam and Hadeel (2021) that COVID-19 prompted the educational authorities, lecturers included into adopting alternative learning method that guarantees spatial distancing and hence the adoption of e-learning. Deepika (2020) concurred in his finding that, to reduce the COVID-19 virus, educational institutions have been forced to switch to e-learning using available educational platforms in order to explore the potential challenges facing learning activities during the period. This mandatory switch over to e-learning by lecturers must have contributed in the awakening of their interest in e-learning as reflected in their responses.

The findings on research question 2 with average mean score of 2.03 and a low extent of agreement in all the item statements indicated that. COVID-19 helped to develop online instruction and communication of lectures to a low extent. The findings mean that COVID-19 did not help much in developing lecturers' activities online because even with the prompting of COVID-19, lectures' use of projectors, power point, wireless communication networks and holding meetings, computing students' result and transferring files online are still to be perfected. Concurring to this, Aboagye, Yawson and Appiah (2020) observed that inspite of the role played by COVID-19 in boosting e-learning in education, its' level of usage in Nigeria is still low and not really encouraging compared to other nations. Adetona, Ogunyami and Oduntan (2021) also noted that in agreement that though COVID-19 contributed to the increasing lecturers' skill in use of computer, they still need to effectively utilize the vast knowledge of e-learning especially in communication with students. These observations show that, though COVID-19 made an impact in lecturers' e-learning experience, lecturers' still need to acquire more e-learning competencies to make a better impact in the education system.

The findings of research question 3 indicated that after COVID-19 pandemic, most challenges encountered by lecturers by lecturers in e-learning before the pandemic still

remains unresolved. The findings revealed that though COVID-19 pandemic boost e-learning, lecturers still have the challenges of inadequate e-learning facilities, poor connectivity and networking, lack of financial support, ignorance of most skills needed in e-learning and insufficient training on e-learning. Sahu (2020) confirmed these findings with similar observation that though e-learning improved lecturers' perception of e-learning, the extent COVID-19 affected lecturers 'challenges of e-learning is low. In line with these findings, it was noted by Abdelsalam, Ebitisan and Hadeel (2021) that even after COVID-19 pandemic, the usage of e-learning for instruction in tertiary institutions was still low. This can be attributed to the many challenges faced by lecturers.

Conclusion

This paper researched into the extent COVID-19 pandemic affected the development of lecturers in e-learning. It was discovered that COVID-19 sensitized the lecturers and created the awareness of the importance of e-learning in their profession. They were exposed to e-learning applications and facilities. However, the study also indicated that lecturers are not competent in most of the e-learning applications and they still face the same challenges that they had before COVID-19 pandemic. This calls for the attention of education managers to explore different avenues to help lecturers develop their e-learning interest and be able to utilize it to the fullest.

Recommendation

This paper having discovered that most lecturers are still not well-acquainted with many e-learning applications and hence do not use them for their communication with students and colleagues make these recommendations:

1. Tertiary institutions should organize compulsory periodic workshops for lecturers on improvement of the usage of online applications to improve their e-learning experience.
2. Education managers and planners should endeavour to provide every necessary facility to boost e-learning in Nigeria tertiary institutions
3. Lecturers should endeavour to improve their e-learning experiences by holding online lectures once a while.
4. Management of tertiary institutions should insist on recording of students' result online by lecturers.

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