Harnessing Lecturers' Experience of Emergency Online Teaching for Digitalizing Higher Education Delivery.

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ABSTRACT
During the first COVID-19 lockdown, higher institutions in Nigeria, like others in the global community, resorted to Emergency Remote Teaching (ERT). The experiences and perceptions of ERT are being harnessed to build a stronger education system, especially digitalized teaching/learning, to withstand future occurrences such as the COVID-19 lockdown in various communities at all levels of education. This study aimed at assessing lecturers' perceptions of their ERT experience and the future of digitalized teaching/learning in the higher institution. Using a descriptive survey method., we obtained the perceptions of 230 lecturers at the College of Education, (now University of Delta), Agbor, Delta State, Nigeria. We found that the lecturers had the challenge of unpreparedness to use online pedagogy and expressed low acceptance of the ERT. From their perceptions, the ERT, though necessary, was not successful and they opted for blended teaching/learning in the future, with the availability of adequate internet connectivity and ICT infrastructure/devices for both lecturers and students. It is concluded that the lecturers' perceptions from their experiences of the ERT could advise on the direction/ need for investment in the digitalization of higher institutions in Nigeria
Keywords: *COVID-19 pandemic, Emergency Remote Teaching, Higher Education delivery, Online teaching prospect, Nigeria.*

I.   INTRODUCTION

Prior to the COVID-19 pandemic, a paradigm shift in Information Communication Technology (ICT) engaged the attention of academics. The digital age which commenced in the 1970s and acquired profound prominence in the 21st century drove the delivery of education from face-to-face (F2F) classroom teaching towards virtual (or distance/online) teaching or a blend of the two modes. However, online teaching has been perceived as a means of increasing access to education in Sub-Saharan Africa (Trines, 2018), and achieving the sustainable development goals of education for all. In this vein, Nigeria established an online-based higher institution, the National Open University of Nigeria (NOUN) in 2002 to increase access to higher education (Agunloye, 2021). When access to education was obstructed due to the imposed lockdown to curtail the spread of COVID-19 disease, all Nigerian higher institutions which hitherto had used the traditional face-to-face teaching mode were forced to teach online in tune with the global education response to the pandemic. The teaching experiences in emergency remote teaching (ERT) have been shown to be different from the well-planned online teaching in online-based institutions such as NOUN and others. Hodges, Moore, Lockee, & Bond (2020) described ERT as a non-permanent shift of instructional delivery to an alternative mode due to a crisis. In the case of the COVID-19 crisis, the use of fully remote teaching solutions to deliver instructions in alternative modes to face-to-face and blended/hybrid modes was adopted. The remote teaching solutions could include forms of online teaching using various technological devices but cannot be as robust as fully developed online course systems in terms of planning and implementation. This paper is aimed to assess the perceptions of the lecturers about their experiences with emergency online teaching amid COVID-19 and the prospects of online teaching after the COVID-19 pandemic.

Online Teaching and the Importance of ICT Integration in Higher Education

The COVID-19 pandemic and its associated education response of online emergency remote teaching have presented to the global community the opportunity to focus on the development of online teaching and learning with utmost urgency. The closure of schools (and consequent disruption of education) aimed at curbing the rapid spread of COVID-19 (UnitedNationsEducational, Scientific and CulturalOrganization (UNESCO), 2020a) was followed by the transition to online teaching to recover the delivery of education (UnitedNations

(UN), 2020a). The emergency transition to the online mode of teaching and learning required the use of technology integration in education and the teachers' competence in ICT.

Prior to the COVID-19 pandemic, the integration of ICT in education was globally considered a necessity in the current knowledge-driven society. Considering the future of education and skills in the 21st century, Organization for Economic Cooperation and Development (OECD) (2018) projected the need for students to use new ICT devices to apply their knowledge in unknown and evolving circumstances. COVID-19 pandemic is one of such unknown circumstances which has projected the importance of technology integration in education, and it has not been completely phased out since new variants (Delta and Omicron) are emerging and spreading across the world. Educators at all levels are expected to embrace this integration despite their peculiar challenges. This study surveyed the perception of lecturers on the importance of ICT integration in higher education from their experience of the online ERT.

Lecturers' Challenges in the Online Teaching During the COVID-19 Lockdown

The challenges faced by teachers in emergency remote teaching amid COVID-19 have been reported in many studies and three dimensions are identified: poor virtual orientation of some institutions and the learning environment, unpreparedness and poor attitude, or lack of acceptance. Generally, lecturers were compelled to resort to teaching online but some of them embraced the situation as a new opportunity as seen in the studies of Akram, Aslam, Saleem,& Parveen (2021) and Adarkwah (2021), while some studies found non-acceptance of online teaching (Muftahu ,2020). The non-acceptance is a manifestation of their unpreparedness as reported by Agormedah, Henaku, Ayite, & Ansah (2020). The challenges faced by lecturers in online teaching during the COVID-19 lockdown are related to those of using ICT in teaching prior to the pandemic. Poor training in using ICT to teach has been a barrier to lecturers' digital approach to teaching since they are neither ICT competent nor technology ready and consequently lacked the interest to change (Mondal and Mete, 2012; Melo, Llopis, Gasco, & Gonzalez(2020). This is reflected in the findings that the challenges of lack of training, or poor ICT competencies adversely affected the lecturer's experiences in the ERT (Siddiquei and Kathpal, 2021; Zalat, Hamed,&Boibol,2021; Canadian Commission for UNESCO, 2020). The challenges of lecturers in online teaching reflected the technological divide among the nations of the world also. It was also seen that pre-pandemic experiences with educational technology influenced teachers' online teaching during the pandemic (Kaqinari,Makarova,Audran, et al, 2021)). Hence in the developed nations, lecturers in higher education experienced minimal challenges, as they were used to online teaching prior to the pandemic. Their adjustment to the new normal was easier due to the existing ICT infrastructure in the countries and institutions (Naffi, Davidson, Wallace, et al 2020). But in less technologically advanced nations (like those in Sub-Saharan Africa), lack of previous sound exposure to conducting online classes, lack of ICT infrastructure, and unpreparedness for the sudden change posed serious challenges to lecturers in higher institutions (Akram, Aslam, Saleem, & Parveen, 2021; Adarkwah, 2021). This study surveyed the challenges of lecturers during the ERT in a developing nation, Nigeria.

The Success of the Emergency Remote Teaching in Higher Institution

In the education industry, ranging from the policymakers, education administrators/managers, communities, and parents to the teachers and learners, the impact/success of ERT was based on their direct involvement and experiences in the process. The views expressed in various studies and reports could be considered in terms of its success/effectiveness and the prospects it holds for education delivery at all levels. The focus of this study is the higher education level.A profound impact of the online ERT was the vivid portrayal of the importance of the use of ICT in higher education delivery in the world since it was inevitably technology driven. This sudden global awakening in the use of technology in education was highlighted in variousstudies/reports as a timely paradigm shift in education delivery that should be sustained (World Economic Forum (WEFORUM), 2020; UN, 2020b; World Bank, 2020a; UNESCO, 2020a; Adarkwah, 2021; Kolar, Turcinovic&Bojanjac, 2020; Chaturvedi, Purohit, & Verma, 2021). The ERT experience fast-forwarded global implementation of the change in higher education. The global use of ERT during the first wave of COVID-19 is seen in the reports of the study of 120 Low- and Middle-Income Countries (LMIC) by Barron ,Cobo, Munoz-Najar, et al(2020) and that of 74 countries by Munoz-Najar (2020).

Lecturers in higher institutions shifted successfully to online ERT but they experienced the effectiveness of this change at various levels as shown in literature. Lecturers who were experts in online teaching/activities felt more at home with the sudden change while novice online teachers struggled with the demands of the ERT (Lee et al, 2021)). The ERT tasked the creativity of lecturers to harness the flexibility involved in the virtual process to achieve success. Erlam,Garrett, Gasteiger, et al (2021) found that what really mattered was that the remote teaching took place in very flexible ways despite the challenges. Ali (2020) reported that staff confidence and readiness contributed immensely to lecturers' success in the ICT integrated teaching. There were varying degrees and dimensions of success and effectiveness of online teaching depending on the challenges which were encountered and surmounted in various institutions by lecturers. In some cases, all the students could not be

reached as expected (OECD, 2020; Munoz-Najar, 2021), due to poor connectivity. However, with low-tech, many students were reached despite the associated limited interactions/engagement during the teaching process (Barron et al (2021)). In this study, the perception of the lecturers on the success of their own experience of the ERT was surveyed.

The Prospects of Online Teaching in Higher Education in the Post-Covid Period

From the top global community to the teachers and learners at the grassroots of education, the lessons learned from the online ERT of COVID-19 and the consequent perception of the future of online education have emanated. OECD (2020) indicated that the COVID-19 pandemic provided a powerful test of the potential of online learning and outlined some features in the present education system which could help to unlock and harness the potential. The features included upskilled and reskilled teaching staff, upgraded digital infrastructure, and the development of online courses. The continual follow-up of the education response has been in the direction of strengthening the online/virtual education delivery for the safety of learners and ultimately for the perceived achievement of the sustainable development goal of education-for-all. (UNESCO,2021a; UNESCO ,2021b). The developments project a bright future for online teaching/learning.

Studies revealed that teachers and learners perceived that online education has prospects in post-Covid education delivery. The common thread running through the perceptions is that the lessons learned from the challenges of the online ERT should be utilized to achieve more effective online teaching at all levels of education. Some learners opined that in the future, online teaching/learning should only be a supporting tool in a blended mode (Garg, 2021; Erlam et al, 2021) while some lecturers proposed a more holistic, realistic, and sensitive approach to be adopted for future online teaching (Lee et al, 2021). The results of studies showed that the provision of adequate access to hardware and software devices to teachers is a necessity for it to thrive in higher education (Fhloinn and Fitzmaurice (2021)). From studies, some researchers, (Blankenberger (2020) & Mishra et al (2020) proposed an effective transformation of formal education into online education using virtual classes and other pivotal online tools. These proposals spell huge prospects for online teaching/learning. In Nigeria, ERT was implemented in schools during the COVID-19 lockdown (Barron et al, 2021).But there is a huge problem with access to higher education, such that some stakeholders considered online education as a legacy of COVID-19 for a solution to this problem in Nigeria. (Okocha, 2021). Reports from the Joint Admission and Matriculation Board (Tribune online, 2022) showed that only about 100,000 (16.67%) out of about 600,000 eligible candidates had gained admission into 91 existing higher institutions (Universities) in 2021. In this same period the National Open University of Nigeria (NOUN) which runs online courses hosted over 550,000 students and matriculated over 15,000 and 14,000 students in 2020 and 2021 respectively (NOUN, 2021). With this huge potential of online education for enhancing access to higher education as seen in the case of NOUN,its prospect in Nigeria looks positive. However, Egieleva, Igogho, Iyalombe et al (2022) studied the perceptions of students on the COVID-19 digitalized education and concluded that the higher education students in Nigeria had low acceptance of online learning technology, and preferred traditional classroom setting. Using the diffusion innovation theory, the study conclusively placed the students in the "Laggards adoptor categorization". Although this is an insightful finding, it is not a healthy positioning for higher education students from all the tertiary institutions in Nigeria, (University, Colleges of Education, and Polytechnics). It is necessary to obtain the inclination of the lecturers as the key players in the use of technology in the teaching-learning process in the same environment that is described as poor in internet infrastructure. Hence this study surveyed the perception of the lecturers on the future of online teaching based on their ERT experience.

The main objectives of this study are to obtain the perceptions of the lecturers on (1) their challenges during the Emergency Remote Teaching, (2) their acceptance of the ERT, (3) the overall success of the ERT, (4) the prospects of online teaching and (5) to determine possible correlations between the variables in (1), (2), and (3). The following research questions were drawn from the objectives.

Research Questions

1.   What are the perceptions of the lecturers about (i) the necessity and their embrace/acceptance of the online emergency remote teaching ERT, (ii) their personal challenges in the ERT, and (iii) the success of the ERT?

2.   Are there significant associations between the perceptions of the lecturers on their challenges, their embrace of the ERT and the success of the ERT?

3.   What are the lecturers' perceptions about (i) the future use of online teaching, and (ii) the incidental awareness created by the online teaching experience?

II.   METHODOLOGY

The Context of the Study

This study was carried out in the College of Education, Agbor, Delta State, Nigeria (now upgraded to a university, University of Delta, Agbor). The College was a teacher preparation tertiary institution for the award of the Nigeria Certificate in Education (NCE), the minimum teaching qualification in Nigeria. The mode of teaching is officially the traditional face-to-face (F2F). The report of the first case of COVID-19 in Nigeria on the 27th of February 2020, and the consequent rapid spread of the virus caused the closure of all tertiary institutions and a directive to switch to online emergency remote teaching (ERT) during the lockdown (Adepetun and Lawal, 2020). The College commenced the preparation for switching to ERT by organizing an orientation for lecturers to teach online in June 2020, when the movement of staff to the campuses could be made, while strictly observing the non-pharmaceutical rules (Royal, 2020). The details of the training of the lecturers for online teaching were reported by Egede (2021). Thereafter, lecturers started teaching their courses online for the second semester, 2019/2020, in July 2020, while the students were in their homes during the lockdown. This study focused on the perceptions of the lecturers about the online teaching which took place from July to the end of September 2020.

Theoretical Background

This study was guided by the self-perception theory developed by psychologist, Daryl Bem in 1972 which suggests that people develop attitudes and opinions by observing their own behaviour and drawing conclusions from it (Mohebi and Bailey, 2020). In adaptable terms, the theory implies that people rely on their behaviours in various circumstances to understand their inner states such as beliefs and attitudes. In this study, the circumstance is the online emergency remote teaching experience which called for novel behaviours from the lecturers and caused them to develop perceptions. Perception can be a way of recognizing and interpreting information that is gathered from the senses (UK Essays, 2018). It includes how people react to situations.

Self-perception theory is chosen for this study because it is one of the two theories of perception which can help researchers understand teachers' perceptions of their online teaching experience during the COVID-19 emergency. Consequently, the lecturers should exhibit reactions like acceptance of the ERT and form opinions on the success or otherwise of their experience including their uptake of online pedagogy in the future, based on the self-perception theory, as sought in this study. Mohebi and Bailey (2020) obtained results that showed that self-perception theory is a valuable framework for researchers aimed to improve educational policies and programs. Several studies in education have been conducted using the self-perception theory (Rhodes, 2015; Matthew, 2017; Mohebi and Meda, 2021). Mohebi and Meda (2021), guided by self-perception theory, examined the perceptions of trainee-teachers and faculty supervisors about online field experiences with children. Understanding the perceptions of lecturers about their online teaching experience is used in this study to determine the success, challenges, and prospects of online teaching in the higher institution used.

Research Design.

The study was conducted using a quantitative descriptive survey. A descriptive survey is satisfactory for assessing the perceptions that the lecturers had already formed without manipulation by the researchers (McCombes, 2020). The survey employed a quantitative method with a structured questionnaire (Streefkerk, 2021), in which the responses were recorded in numerical values.

Population and Sample.

Two hundred and forty (240) lecturers in the College (as at the time of the study) formed the population. The total population sampling technique was used to include all of them as a sample for this study. Total population sampling was suitable in this case because all the lecturers shared a common characteristic of having the opportunity to participate in the online ERT, and all of them could be reached within the study period (Stephanie, n. d.). The final sample was 230 lecturers who completed the questionnaires.

Demographic details

The demographic details of the lecturers who responded to the questionnaire, according to thegroupings of their subject specializations and gender are shown in Table 1 below.

Table 1.
Demographic Details

Subject areas	Number
1. Arts & Languages	46
2. Vocational & Social Sciences	118
3. Pure Sciences	66

Gender		
1.	Female	70
2.	Male	160

Total(N)= 230

Instrument

A structured questionnaire, Perceptions about the Online Emergency Remote Teaching (POERT), was constructed by the researchers in line with the quantitative design (Streefkerk, 2021) and the self-perception theory. POERT consists of 19 items in two sections: A and B. Section A contains the split variables: gender and department of lecturers. Section B consists of items that are based on the variables in the research questions, with a four-point Likert-type response set. Likert-type items are suitable for measuring perceptions using the "levels of agreement anchors" in quantitative research (Moura, 2020). The Likert-type questionnaire items attract responses ranging from "strongly agree", (4), "agree", (3), "disagree", (2) to "strongly disagree", (1). Four-point response-set is considered appropriate to eliminate the 'neutral' or 'uncertain' option since all the respondents experienced the shift to the online pedagogy which elicited novel behaviours to enable them to express reactions and form opinions according to the self-perception theory. The questionnaire was content and face-validated by two experts in Educational Management and Measurement and Evaluation, in the College of Education, Agbor. The topic, the purpose of the study, and the research questions were presented to the experts to guide them to ascertain the relevance and clarity of the items for the study. The suggestions and recommendations of the experts were used to correct the questionnaire and make it fit for the study.The Cronbach's alpha (α) measure of reliability was computed using SPSS 23.0. The computed value α =.74 was considered appropriate for the use of the instrument for this study.

Data Collection

A personal administration of the questionnaire to the lecturers was done in a meeting for all academic staff of the College which was summoned after the online teaching period. The lecturers were given the questionnaires as they signed the attendance register. However, the lecturers were duly informed that the filling and submission of the completed questionnaire was voluntary and anonymous. The number of completed questionnaires that were retrieved during the meeting and used for the study is 230 (96% of 240). The response rate of 96% is considered acceptable for educational research (Morton et al, 2012).

Data Analysis

The data analysis was performed using SPSS 23.0 and frequency counts, percentages, means, and standard errors of the means were computed. The mean values were interpreted using the guidelines proposed by Jonald (2019) in which a weighted mean computed from measurement on the ordinal scale of the Likert-type responses is considered valid in surveys and interpreted as shown in Table 2. Non-parametric correlation coefficients (Kendall's tau (τ) which are suitable for ordinal variables with non-normal distribution are computed to analyze the association between some of the lecturer's perceptions as in the research questions. The values of the statistics for Kolmogorov-Smirnov and Shapiro-Wilk tests (not shown in the paper) for the normality of the distribution of the data for the variables indicated non-normality.

Table 2
Interpretation of the Mean Values in the Four-point Likert Scale

Likert Scale Value	Meaning	Interval	Difference	Description/Interpretation
1	Strongly Disagree	1.00 – 1.75	0.75	NoPerception
2	Disagree	1.76 – 2.51	0.75	A little Perception
3	Agree	2.52 – 3.27	0.75	Moderate Perception
4	Strongly Agree	3.28 – 4.00	0.72	Strong Perception

Adapted from Jonald (2019).

III.   RESULTS

The results of the study are presented in the order of the research questions. Table 1 guided the interpretation of the weighted means.

Research Question One.

What are the perceptions of the lecturers about (i) the necessity and their embrace/acceptance of the online emergency remote teaching ERT, and (ii) the success of the ERT, and (iii) their personal challenges in the ERT?

Table 3.
Lecturers' perceptions on the necessity, embrace, and success of the ERT and their personal challenges

S/N	Perception	Mean (M)	S.E.	Description/Interpretation
1.	Online ERT was unnecessary	1.97	0.060	No perception
2.	Online ERT was not embraced	2.95	0.040	Moderate perception
3.	Lack of ICT skills was a challenge	2.50	0.069	*A little perception
4.	Inadequate preparation for ERT was a challenge	2.95	0.045	Moderate perception
5.	ERT was successful	2.32	0.064	*A little perception
6	ERT required better planning for success	3.59	0.035	**Strong perceptions
7.	ERT revealed the importance of ICT in higher education delivery	3.33	0.046	Moderate perceptions

N=230   *Weak perception **Strong perception

The perceptions of the lecturers displayed in Table 3 indicated that they did not perceive thatthe emergency remote teaching was unnecessary during the period of the lockdown (M=1.97),but they did not embrace it (M=2.95). They had a weak perception that lack of ICT skills wasa personal challenge (M=2.50) but perceived that inadequate preparation for the ERT wasa

personal challenge. They had aweak perception that the ERT was successful (M=2.32) but strongly perceived that betterplanning could have made it successful (M=3.59). In addition, they strongly perceived (M=3.33) thatthe ERT exposed the relevance of ICT in education delivery which is an acceptable dispositionin the 21stcentury.

Research Question two.

Are there significant associations between the perceptions of the lecturers on their embrace of the ERT, the success of the ERT, and their challenges in the ERT?

1.   What are the lecturers' perceptions about (i) the future use of online teaching, and (ii) the incidental awareness created by the online teaching experience?

Table 4.
Correlation between lecturers' perceptions of acceptance of ERT, the success of ERT, and their personal challenges

Perceptions	Statistics	Inadequate preparation for ERT	ERT was not embraced	ERT was successful
Inadequate preparation for ERT	Kendall's tau(τ) Sig. (2-tailed)	1.000	.558 .000*	-.239 .000*
ERT was not embraced	Kendall's tau(τ) Sig. (2-tailed)		1.000	-2.87 .000*
ERT was successful	Kendall's tau(τ) Sig. (2-tailed)			1.000

N=230   * Significant at 0.05 level

        The results displayed in Table 4 indicated that the lecturers' perceptions about their challenge of inadequate preparation was significantly and positively correlated to their perception that it was not embraced. ((t) =.558; p=.000). This implied that those who perceived that they were inadequately prepared also perceived that it was not embraced. But there was significant negative correlation between their perception of inadequate preparation and their perception about the success of the ERT. ((t) =-.239, p=.000). The lecturers who perceived that they had personal challenge of inadequate preparation did not perceive that it was successful. Similarly, those

who perceived that ERT was not embraced did not perceive that it was successful. ((t) = -.287; p=.000).

Research Question three.
What are the lecturers' perceptions about (i) the future use of online teaching, and (ii) the incidental awareness created by the emergency online teaching experience?

Table 5.
Lecturers' perceptions of the use of online teaching in the future and awareness created by ERT.

S/N	Perceptions	Mean (M)	S.E.	Description/Interpretation
1.	Online teaching should not be stopped	3.53	0.051	** Strong perception
2.	Online teaching should not replace F2F mode	3.33	0.035	** Strong perception
3.	Blended mode is the most appropriate	3.57	0.046	** Strong perception
4.	A stable and strong network is required	3.83	0.027	** Strong perception
5.	Personal ownership of ICT gadgets by lecturers/students is required	3.46	0.035	** Strong perception
6.	Online teaching should be included in the NCE curriculum	3.36	0.044	** Strong perception
7.	ERT experience could enhance virtual conferencing skills	3.59	0. 084	** Strong perception
8	ERT revealed the level of virtual orientation of institutions	3.31	0.049	**Strong perception

N=230   **Strong perception

The results shown in Table 5 indicated that the lecturers strongly perceived that, in the future, online teaching should continue (M=3.53), not as a replacement for F2F mode, (M=3.33), but in the blended or hybrid mode (M=3.57). They strongly perceived that a stable and strong network (3.83), personal ownership of relevant ICT devices (M=3.36), and the inclusion of online teaching in the NCE curriculum (M=3.46) are prerequisites for its future use in the institution.Furthermore, they strongly perceived that their experience of the ERT revealed that online teaching could enhance their virtual conferencing skills (M=3.59). From their observation of other similar institutions, ERT has also exposed the levels of virtual orientation of higher institutions (M=3.31).

IV.   DISCUSSION

The lecturers perceived that the ERT was necessary. This perception portrayed the reality of the circumstance in which they had no other way of reaching their students except through online teaching during the lockdown which confined the students to their various residences. This is in line with the observation of Trines (2018), that online teaching has been perceived as a means of accessing education in Sub-Saharan Africa and its potential for reaching diverse and dispersed learners (UN, 2020a). However, they did not embrace this necessary activity like the findings of some other researchers (Muftahu, 2020; Agormedah et al, 2020) who reported that lecturers were not ready for the drastic change and did not accept the online remote teaching. Educators as humans are not likely to embrace wholeheartedly necessary activities which present insurmountable obstacles to the expected success. This result could be understood by the perceived challenge of lack of preparedness encountered by the respondents, despite their possession of ICT skills. These same lecturers perceived that they could teach online after their training for the ERT (Egede, 2021) which corroborates their perception in this study that they didn't have the challenge of lack of ICT skills. Lack of preparedness despite their ICT skills could result from a lack of pre-pandemic experience with the use of ICT in education/online teaching as observed by Kaquinari et al (2020), lack of existing ICT infrastructure in technologically disadvantaged countries as reported by Naffi et al (2020) in addition to the poor virtual orientation of higher institutions in Sub-Saharan Africa as found by Akram et al (2021) and Adarkwah (2021). Hence, they could not easily adjust to the sudden change and felt ill-prepared. Being adequately prepared depends partly on the level of existing ICT infrastructure which has been shown to be generally poor in Nigerian higher institutions (Egielewa et al, 2021), making this finding a portrayal of the reality of their perceptions. Although the lecturers did not perceive the online ERT as successful from their own experience, they acknowledged that it elucidated the importance of ICT in education and required better planning for the expected success. Adequate planning could be connected to the fixing of network problems, epileptic power supply, and poor internet connectivity that obstructs successful online teaching in Nigeria (Egielewa et al, 2021), which are beyond the control of the

lecturers. However, they struggled through with the online remote teaching which has launched them into the new normal as noted by Erlam et al (2021).

The lecturers perceived that the ERT was not successful. This perception is better explained by the significant correlation it has with their perceptions of their personal challenge (inadequate preparation) and non-embrace of the ERT. This corroborated the observation that staff confidence and readiness contributed immensely to lecturers' success in ICT-integrated teaching (Ali, 2020). Confidence and preparedness to perform any activity are usually supported by the possession of both requisite skills and tools. Embracing an activity is a subset of readiness for it. In other words, achieving the confidence and readiness of lecturers will ultimately lead to the success of online teaching in higher institutions. Sequel to this study, a survey of the students' factors in the ERT showed that they resumed after the lockdown and were taught all the courses again in the F2F mode (Egede&Awuja, 2021) confirming that the students did not learn sufficiently during the ERT. The situation in the institutions that made the ERT to be strongly perceived as unsuccessful is of significant concern in this study. What Egielewa et al (2021) recommended from their earlier study of the students' perceptions that portrayed the ERT in Nigerian higher institutions as unsuccessful, was implemented in this institution after the lockdown. The course delivery using the ERT were repeated in the F2F mode in the college. Hence, the lecturers' strong perceptions that the ERT was unsuccessful corroborated the result of Egielewa et al (2021) from the students' perceptions and calls for a concerted effort to make the 'new normal' of online course delivery a reality in the institutions.

On the future use of online teaching the lecturers perceived that online teaching should neither be stopped nor replace F2F but favoured a blended mode. Furthermore, they strongly perceived that the availability of a strong network, ownership of ICT gadgets by both staff and students, in addition to the inclusion of the mode of teaching in the students' curriculum to create awareness for them are necessary for successful future use of online teaching in the institution. With these perceptions, the lecturers recognized the shifting of education delivery to digital mode as envisaged globally (OECD, 2020; UNESCO, 2021a; World Bank, 2022). The results corroborate those of Garg (2020) and Erlam et al (2021) in which students preferred the blended mode and that of Lee et al (2021) that lecturers proposed a more realistic form of online teaching in view of the challenges they encountered. The results were contrary to those of Egielewa et al (2021) in which the students preferred the teaching in the F2F mode to continue. In line with the challenges of unstable power supply and unavailable strong internet connections prevalent in higher institutions in Nigeria as reported by Egielewa et al (2021), the lecturers strongly perceived that the provision of a strong network shall boost the prospect of online teaching. In addition, the necessity of provision of ICT devices for lecturers as found in the studies of Fhloinn and Fitzmaurice (2021) was recognized by the lecturers in this study. This implied that the lecturers lacked the provision of these ICT devices for online teaching. The lecturers' perception that online teaching should be included in the NCE curriculum could relate to their perception that their students lacked ICT skills for the ERT as reported by Egede&Awuja (2021). Generally, these perceptions indicate recognition of potential hitches and enhancers for online teaching in the future. We expect and conclude that the situations portrayed by these perceptions can be harnessed to achieve bright prospects for online teaching in higher institutions in Nigeria.

The results also showed that the ERT experience created an incidental awareness of its potential in enhancing lecturers' virtual-conferencing skills. Virtual conferencing is one of the global e-activities which were enhanced following the outbreak of COVID-19 (Flaherty, 2021). This perceived incidental awareness is interpreted as a positive index of the prospect of online teaching in the institution that has been exposed to mainly in-person conferencing. Another perceived incidental awareness is the levels of the virtual orientation of institutions in the environment of the study. The glaring digital divide within various levels of educational systems was reported as a profound global factor in ERT during the pandemic (UN, 2020b; World Bank, 2020a), in higher education (Laufer, Leiser, Deacon et al, 2021), and in Nigeria (WEFORUM, 2020; Hussein, 2020). In Nigeria, it is observed that private schools tend to be well equipped with ICT infrastructure and attract learners from affluent/wealthy families and consequently can afford online teaching with greater convenience (Hussein, 2020). The children of some of the lecturers were students in the private tertiary institutions and they successfully completed their semester courses during the lockdown period unlike those in the public (government-owned) ones. The strong perception of the lecturers for this awareness in this study portrays profound reality. The result points to the roadmap (the provision of adequate levels of virtual orientation) which can enhance the prospects of online teaching in all higher institutions in Nigeria that we propose in conclusion from these results of this study.

V. RECOMMENDATIONS

This study has implications for all stakeholders in higher education especially lecturers, researchers, policymakers, and funding bodies. From the lecturers' experiences, the online ERT was considered necessary to engage the students with a measure of teaching rather than no teaching at all, but it failed to engage the students

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effectively. To harness the experiences of the lecturers as found in this study for the desired prospect of online teaching in higher institutions in Nigeria, the following recommendations are made.

• Lecturers should be afforded opportunities to practice and use online teaching in addition to F2F, (blended mode) as an offshoot of the ERT experience to be well-positioned for similar future emergencies.

• To this end, funding bodies that assist in the development of higher institutions should invest more by availing robust internet facilities and ICT devices to achieve the virtual orientation appropriate for this digital age.

• Policymakers should consider the provision of the required technological infrastructure as an urgent need

• Researchers can carry out further studies using more public and private higher institutions to enhance the generalization of findings.

STRENGTH AND LIMITATION

The position of researchers as participants in the program provided the opportunity to know some of the views expressed by the respondents prior to the study as they reviewed the ERT experiences in free general discussions. This knowledge helped tin the construction of the quantitative questionnaire to include the items which were already in the views of the respondents. Another strength of the study stemmed from the timing of the study immediately after the ERT experiences when their perceptions were fresh in their memories and with little thinking they could respond and express their thoughts about the novel experience. This strengthened the reality/validity of the results. However, the population and sample were limited to only one institution, the College of Education, Agbor. This limits the generalization of the results. Future similar studies should consider the use of more institutions to enhance generalization of results.

VI. CONCLUSION

The results of this study revealed that the online emergency remote teaching was perceived by the lecturers of the defunct College of Education (now University of Delta), Agbor as a necessary strategy during the COVID-19 lockdown, but they did not embrace it. They perceived that it was not successful and that they experienced the challenge of unpreparedness for the strategy. However, they strongly perceived that the blended mode of teaching is more appropriate in the future, granted the provision of a strong internet facilities and power supply. In addition, they held a strong perception that lecturers and students should possess personal laptops and other relevant ICT devices, while the concept of the online teaching should be included in the Nigeria Certificate in Education (NCE) curriculum for effective use of the mode of teaching. The perception that the ERT created incidental awareness of the necessity of ICT in education, revealed the levels of virtual orientation of various higher institutions, and possess the potential to enhance their virtual conferencing skills was strongly held among the lecturers. Emphatically, the lecturers perceived the necessity of online teaching in the emergency, the requirements for facilitating it, and the blended mode as more appropriate for its post-emergency use. Using the results of this study and that of other related studies, effective digitalizing of higher education in Nigeria could be achieved.

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