LECTURERS' CAPACITY FOR ONLINE TEACHING AND IMPLICATION FOR MANAGING EMERGENCY SHUTDOWNS IN NORTH-CENTRAL NIGERIA

BY

Jumoke I. Oladele (PhD): Department of Social Sciences Education, Faculty of Education, University of Ilorin

Abass K. Adegoke: Department of Social Sciences Education, Faculty of Education, University of Ilorin

Emmanuel. T. Sowunmi (PhD): Department of Social Sciences Education, Faculty of Education, University of Ilorin
&
Atinuke O. Adeniji: Kwara State Universal Basic Education Board, Ilorin, Kwara State
Corresponding author: oladele.ji@unilorin.edu.ng

Abstract
The educational sector has gone online as a way of forestalling a total collapse of teaching and learning activities at all levels of education necessitated by the lockdowns to curtail the spread of the novel coronavirus ravaging the world. While this measure has been useful in forestalling a total shutdown of educational activities, it is pertinent to ascertain lecturers' capacity for online teaching and research. This study adopts a descriptive research design of survey type. The population for the study were University lecturers while the target population were lecturers in North-Central Nigeria. A multi-stage sampling technique was employed, consisting of stratified and cluster sampling techniques. Data were collected using the Lecturers' Skills for Online Teaching Questionnaire "LCOT" which was administered using Google forms at both the pilot testing and final administration stages of the study. The reliability of the instrument was established using the measures of internal consistency (Cronbach's alpha with reliability indices of 0.94 and 0.91 for Sections C and D sub-scales). Data was analyzed using descriptive statistics. Findings from this revealed a dart of online teaching and assessment tools for university lecturers who were faced with a myriad of challenges with using the existing ones and have a dear need for training for optimal performance with online teaching. It was recommended that the government should invest in educational infrastructure for higher institutions. Workshops should be organized on designing of teaching materials for online use.

Keywords: University lecturer, Capacity, Online teaching, Emergency lockdowns and Covid-19

Introduction
The world has been hit by an unprecedented pandemic leaving economies globally struggling for survival. Faced with the novel CoronaVirus also called Covid-19 first reported on December 31, 2019, in Wuhan City, Hubei Province, China, the virus has spread into 54 African countries, having over two hundred thousand infections. As of June 2020, the Africa CDC reported the death toll from the pandemic at six thousand, four hundred and sixty-four. Amid the rapid spread of Covid-19 across the African continent, Nigeria has been found to be one of the profoundly affected countries with a total of 27,564 infections (Xinhu, 2020; Ewodage, 2020). With the fear of a second surge of Covid-19, the World Health Organization (WHO) has urged countries to press on with efforts to contain the virus (Steward, 2020; Reuters, 2020) while efforts are made to proffer a lasting solution to curing the virus for infected persons while keeping the un-infected safe from the virus.

Measures for curbing its spread include ensuring a high hygiene level, social distancing and lockdowns which have affected all sectors of the economy not leaving out the educational sector leading to a discontinuity in education (Oyeniran, Oyeniran, Oyeniyi, Ogundele & Ojo, 2020). To forestall a total collapse of educational activities, teaching, learning and in Nigerian universities have gone online. Though the Federal Government of Nigeria made frantic effort to reopening of schools starting with examination classes with little success (Muyideen, 2020). This strengthens the fact that online teaching will still be relied on for teaching, learning and research made possible by Information and Communication technologies (ICT). The ubiquity of ICT has immensely made a landmark in reshaping the structure of instruction delivery in education. Classroom boundaries have exceeded the realms of your time, location, and physical presence (Barber, Donnelly, Rizvi, & Summers, 2013). Limited classroom space is way from being enough to satisfy teaching and learning demand which is the reason why contemporary teaching pedagogies, learning skills, and assessment methods have emerged to adapt to those changes (Barber et al., 2013). Besides, new formats of learning have thrived. an outsized number of courses, certificates, and degrees are earned through attending open universities, online education, or massive open online courses (MOOCs) (Allen & Seaman, 2014; Siemens & Matheos, 2010). In line with the above insinuations, there's a transparent indication that online

teaching is much needed not as a replacement for traditional ways but to play its own substantial role in taking educational quality to a different level especially in light of worldwide ongoing pandemic.

In response to forestalling the lockdowns experienced with covid-19, any nation that has the interest for a sustained educational system must endeavour to opt for the online teaching and learning modes. Online teaching has been utilized in a special form which can be digital teaching, distance learning, web-based teaching, computer-based teaching, online class and online instruction because the case could also be. However, online teaching is going to be maintained as an idea during this study and can be defined in a sort of way and from different schools of thought and disciplines. Consistent with Means et al. (2013) online teaching may be a teaching that takes place online termed as purely online learning or partially online termed as blended learning through the web. On the opposite hands, Bakia, Shear, Toyama, and Lasseter (2012) defined online teaching as internet-supporting instructional environments while Ally (2008) describes online teaching as a learning scenario which creates room for growing, knowledge acquisition, and building personal meaning by giving access to learning materials and opportunities via the web. From the definitions it's obvious that online teaching is learning opportunities which happen over the web space which indicates that without the web, online teaching cannot happen.

Albrahim (2020) stressed that the landscape of higher education has changed dramatically in the last twenty years with a rapid growth in higher education enrollment. These changes establish the need for offering online teaching which incorporates improved student access, higher degree completion rates, and therefore the appeal of online courses to non-traditional students (Bolliger & Wasilik, 2009). Online classes became a prominent part of the education landscape, and lots of professors who previously believed they might never teach online are being asked to supply Web enhancements to their face-to-face classes or teach a category entirely online. And, while interest in online classes from both students and college administrators has led to a rise within the number of online classes in parts of the planet with Nigeria inclusive, information for faculty members being asked to supply these classes is sparse, consisting primarily of technology help and advice. Since online teaching is gaining unavoidable acceptance, the need for online teaching on the part of students, teachers and therefore the school now remains the priority of educational stakeholders. This is often because little is out there to assist faculty members navigate the resources, compensation structures, and pedagogical concerns needed to determine virtual classroom (Allen & Seaman, 2011).

A study by Oladele et al. (2021) concluded that Google Classroom being a freely available LMS is a useful innovative instructional approach to university undergraduates' learning. However, teaching in a web environment comes with tons of requirements like readiness, competence, and positive attitude on the part of instructors while supporting resources must be provided by the institution. Sequel to the present, instructors in education may need difficulties handling online teaching, they'll experience feelings of discomfort when handling technology-embedded classrooms and related issues (Palloff & Pratt, 2013). A number of the problems which may deter lecturers from teaching online include the doubt of capability of handling online teaching platform, maintenance of their own identities and attributes as instructors, the learners' demographic, meeting discipline-related demands, the type of coaching they have , the way to achieve success online instructors, the way to assess and evaluate learning outcomes, and the way to affect stress and feelings of frustration while making the transition to online learning environments (Alman & Tomer, 2012; Palloff & Pratt, 2013). Of these constitute an element to be considered if truly online teaching goes to be a reality in Nigerian Universities.

Generally speaking, lecturers receive little or no training and preparation for teaching in education (Palloff & Pratt, 2013). Having said that, the impact of this lack of preparation is magnified in online learning environments. Teaching online and technology-enriched courses require adapting pedagogical practices that are more compatible with the mixing of technology at the postsecondary level (Bailey & Card, 2009). The principles of feedback, andragogy, constructivism, and transformative learning seem to be more appropriate to proclaiming the learner-centred approach, which is one among the web learning foundations (Bailey & Card, 2009). Online instructors must concentrate on what they have to make, develop, and manage their online courses and the way to effectively communicate with the learners within the absence of physical presence and interaction. For both instructors and learners, it's crucial to think about time management issues (Alman & Tomer, 2012). It is therefore imperative for instructors to consider the needed skills for making sure that the objectives for which online teaching is introduced are realized through their human capital development construed as lecturers' capacity for utilizing online platforms for teaching and research purposes and this is the gap this study is poised to fill.

To achieve this purpose, lecturers' capacities were measured in terms of skills required for online teaching. According to European Centre for the Development of Vocational Training (CEDEFOP) 2020, skills measures

information about skill levels is collected through various surveys from individuals while using one or more of the following measures or proxies of skill which are occupation; qualification; duration of education; skill tests; self-assessment; and job requirements. With self-assessments, Individuals can self-report the skills they possess or the skills they use in their day-to-day jobs. Although, self-reports tend to cover a wide range of skills, a down-side of self-assessment approaches which relates to the accuracy with which people self-assess their skills with the tendency to report more (or less) skilled than they really have. To cater for the deficiency with self-reports, it was stressed that instead of asking individuals to self-assess their skills levels, the job requirement approach could be utilised which asks employees about the skills they use in their jobs. This provides both a proxy measure of skill levels (individuals are assumed to possess these skills as they exercise their jobs) and of skill demand (the skills needed in a particular job). This approach can focus on a range of basic and generic skills (e.g. literacy, communication, influencing skills, etc.), and whether the importance of a particular skill is increasing or decreasing. A blend of self-reports and job requirements were employed in ascertaining lectures capacity for online teaching being the major objective of this study. To achieve this objective, the following research questions were raised:

1. What is the profile of available online teaching and assessment platforms Nigerian Universities?
2. What is the capacity of faculty of education lecturers for online teaching in Nigerian Universities?
3. What are the challenges relating to online teaching encountered by faculty of education lecturers in Nigerian Universities?
4. What is the response of faculty of education lecturers in Nigerian Universities to online teaching training needs?

Methodology
This research adopted a descriptive survey designed as a pilot study. The population for the study was university lecturers in North-central Nigeria using a multi-stage sampling method consisting of purposive, random and cluster sampling techniques. North-central geo-political zone has 6 universities. In the first stage, universities were selected purposively based on universities running teacher education programmes. On this basis, University of Ilorin, University of Jos, Federal University of Technology, University of Abuja, Federal University of Agriculture, Makurdi and Federal University Lafia were selected. At the next sampling stage, three universities were randomly selected using the deep and hart method (UNILORIN, UNIJOS, FULAFIA) and in the last stage, lectures were sampled in their WhatsApp group using the cluster sampling techniques. The WhatsApp platforms with faculty of education lecturers were taken as clusters of participants with similar characteristics who participated in the study. Using the WhatsApp groups for data collection was deemed appropriate in view of the lockdowns restricting movements.

The instrument for this study was a researcher developed questionnaire titled Lecturers' Capacity for Online Teaching Questionnaire "LCOT" with six sections. Section One presented a brief background information to the study, Section Two was designed to gather participants demographic information, Section Three had 10 items centered on e-tools for teaching from which respondents were to check those they had skills in using, Section Four had 18 items on requirements for online teaching on a three point scale of No Help Required, Little Help Required and Totally Dependent, Section Five had 11 items to determine the challenges faced with online teaching and research on a three point scale of Largely a Challenge, Moderately a Challenge and Not a Challenge while Section Six had 4 items on training need for online teaching. The instrument was face and content validated by educational measurement/technology experts while its reliability was established using the Cronbach's Alpha method for determining the internal consistency of the instrument applied to Sections four and five. Reliability coefficients of 0.94 and 0.91 were obtained with an overall reliability coefficient of 0.91. The instrument was deployed via Google forms on the selected Universities WhatsApp platforms to ensure adherence to the social distancing measure for curbing the spread of CoronaVirus. The collated data was analysed using descriptive statistics.

Results
Answering Research Questions
Research Questions One: What is the profile of available online teaching and assessment platforms Nigerian Universities?
Research question 1 was answered using charts as shown in Figures 1 and 2.
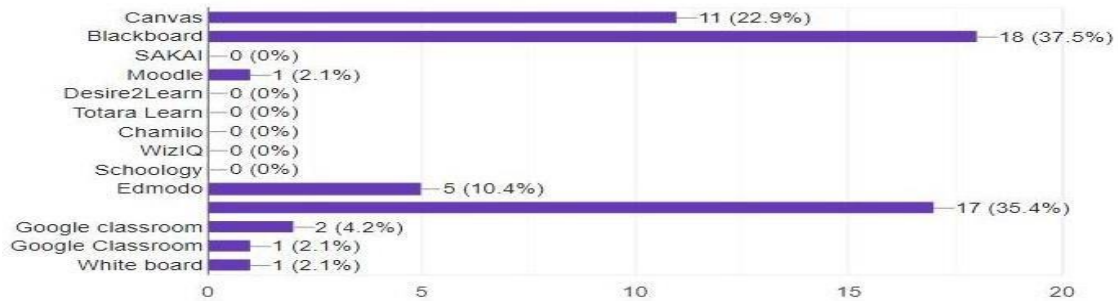
Source: Researchers' Field Studies (2020)
Figure 1: Online teaching platforms

The profile online teaching platforms among faculty of education lecturers are canvas is 11 (22.9%), 18 (37.5%) of them use blackboard, SAKAI is 0(0%), Moodle is 1 (2.1%), those that use Edmodo is 5(10.4%) and 17 (35.4%) of them have not used any of the platforms at all. Furthermore, 2 (10.4%) of them use google classroom, 1 (2.1%) of the respondents use white board. This establishes that blackboard is the most 37.5% used platform for learning management system among faculty of education lecturers.
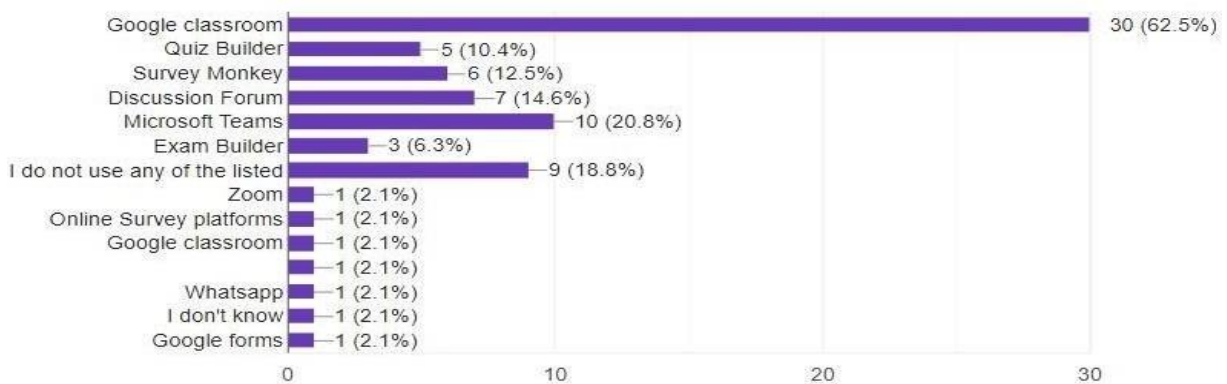
Source: Researchers' Field Studies (2020)
Figure 2: E-assessment tools

The e-assessment tools use by lecturers were recorded that google classroom is 30 (62.5%), 5 (10.4%) of them use quiz builder, 6 (12.5) of the respondents use survey monkey, discussuion forum is 7 (14.6%), microsoft teams is 10 (20.8%), exam builder is 3(6.3%), while 9 (18.8%) have not used any of the listed platforms, those who use zoom, online survey platforms, and whatsapp are 1 (2.1%) respectively.

Research Question Two: What is the capacity of faculty of education lecturers for online teaching/research in Nigerian Universities?
Research Question 2 was answered using descriptive statistics of mean and standard deviation as shown in Table 1.
Table 1: Capacity of faculty of education of faculty of education lecturers for online teaching/research in Nigerian Universities

	N	Range	Minimum	Maximum	Mean	Std. Deviation
CAPACITY	48	2.00	1.00	3.00	1.8750	.73296
Valid N (listwise)	48					

Hint: Mean score ≥ 2.5 = capacity
Table 1 show the score of lecturers on the scale use to measure there capacity in which 1 and 3 were minimum and maximum score derived respectively. The mean score of 1.87 realized is an indication that faculty of education has capacity for online teaching and research in Nigerian universities.

Research Question Three: What are the challenges relating to online teaching and research encountered by faculty of education lecturers in Nigerian Universities?
Research Question 3 was answered using descriptive statistics of mean and ranks as shown in Table 2.

Table 2: Challenges of Online Teaching and Research

Challenges	Mean	Rank
Power	2.4167	1st
Internet access	2.2917	2nd
Technical support for online teaching	2.2500	3rd
Availability of online teaching mentoring	2.2292	4th
Use of computer software for data analysis	2.2292	4th
Use of online channels for data collection	2.1875	5th
Access to plagiarism/editorial software	2.1458	6th
Use of plagiarism/editorial software	2.1458	7th
Development of data collection instrument	2.1042	8th
Use of computer applications for online teaching (GoogleMeet, Zoom, Canvas)	2.0833	9th
Computer literacy	1.6458	10th

Hint: Mean score ≤ 1 is NC; $> 1 \leq 2$ is MC and $> 2 \leq 3$ is LC

NC = Not a Challenge; MC = Moderately a Challenge; LC = Largely a Challenge

Table 2 shows that all the listed challenges except computer literacy pose a large challenge on online teaching and research which is evident from the benchmark of 2.5 mean score and above obtained for all except for computer literacy which poses moderate challenge. The rank further showed the magnitude of how each changes pose problem on online teaching using mean rating and it was shown that Power was rated 1st with mean score 2.42 followed by internet access that stood at 2nd with mean score 2.29 and 3rd with mean score 2.25 is technical support for online teaching. Furthermore, it was recorded that availability of online teaching and use of computer software for data analysis stood at 4th with same mean score 2.23, the 5th is with mean score 2.218 which is Use of online channels for data collection. The 10th which is a moderate challenge has mean score of 1.64. The mean score derived for all the challenges are indication that they are all part of challenges faced by lecturers on online teaching and research.

Research Question Four: What is the response of faculty of education lecturers in Nigerian Universities to online teaching training needs?

Research Question 4 was answered using descriptive statistics of frequency and percentages as shown in Table 3.

Table 3: Online teaching training needs

Training Needs	Yes Frequency (%)	No Frequency (%)
Use of LMS	33(68.8)	15(31.3)
Use of Video Conferencing Platforms (e.g. GoogleMeet)	31(64.4)	17(35.4)
Use of Webinar Platfroms (e.g. Zoom, BigBlueButton)	29(60.4)	19(39.6)
Design of teaching materials for online use	32(66.7)	16(33.3)

As shown in Table 3, majority of the respondents indicated the need for training with using LMS for teaching and assessment, Video Conferencing and webinar Platforms, and with design of teaching materials for online use.

Discussion of Findings

This study investigated lecturers' capacity for online teaching with implication for managing emergency lockdowns as occasioned by the covid-19 pandemic. Findings revealed that blackboard was the most used learning management system though with less than half of the respondents, google classroom for e-assessments. Considering thatthe characteristics of higher education institutions, employment, and students have altered over the last decade with a variety in the tiers and types of programs and degrees offered by different levels and types of institutions, lectures should have an array of online teaching and assessment platforms to choose from (Albrahim, 2020).

In addition, the capacity for online teaching in Nigerian universities was average. This finding correlates with that of Chinamasa (2015) who stressed the need to further develop lecturer online teaching skills in higher education institutions. Some of the challenges revealed by the study ranged from power, internet access, technical support for online teaching to availability of online teaching mentoring being faced by faculty of education lecturers. This is in line with the findings of Oladele, et al. (2021) which also revealed the challenges of power shortage, high cost of computers and related devices, poor internet access, advancing technological know-how, low computer literacy and a large number of students among others as challenges of online learning. Also, respondents had training needs for online teaching. This finding is strengthened by Bakare, et al. (2018) who reiterated the need for training programme

for building the capacities of lecturers of electrical/electronic technology in e-teaching for effective delivery in tertiary institutions in Nigeria.

Conclusion
The study concluded that there was a dart of online teaching and assessment tools for university lectures who were faced with a myriad of challenges with using the existing ones and have a dear need for training for optimal performance with online teaching.

Recommendations
The following recommendations were given based on the findings of this study:
1. The government invest in educational infrastructure for higher institutions.
2. Higher institutions should invest in training workshops should be organized on designing of teaching materials for online use.
3. University lecturers should also leverage on a variety of online learning courses for constant self-development.

References
Albrahim, F. A. (2020). Online teaching skills and competencies. *Turkish Online Journal of Educational Technology-TOJET, 19*(1), 9-20. https://files.eric.ed.gov/fulltext/EJ1239983.pdf

Allen, I. E. & Seaman, J. (2011). Going the distance: *Online education in the United States, 2011*. Babson Survey Research Group and Quahog Research Group.

Allen, I. E. & Seaman, J. (2014). Grade change: *Tracking online education in the United States*. Babson Survey Research Group and Quahog Research Group.

Ally, M. (2008). Foundations of educational theory for online learning. In Anderson, T. (Ed.), *Theory and practice of online learning* (pp. 15-44). Edmonton: AU Press.

Alman, S. W. & Tomer, C. (2012). *Designing online learning: A primer for librarians*. ABC- CLIO.

Bakare, J., Onah B. I., Okereke, G. K. O. (2018). Capacity Building Needs of Lecturers in E-Teaching for Effective Delivery of Computer and Electrical/Electronic Technology Courses in Tertiary Institutions in Southwestern, Nigeria. International Journal of Applied Engineering Research 13,(11), 8736-8750. http://www.ripublication.com

Bailey, C. J. & Card, K. A. (2009). Effective pedagogical practices for online teaching: Perception of experienced instructors. *The Internet and Higher Education, 12*(3), 152- 155.

Bakia, M. Shear, L. Toyama, Y. & Lasseter, A. (2012). *Understanding the Implications of Online Learning for Educational Productivity.* Office of Educational Technology, US Department of Education.

Barber, M., Donnelly, K., Rizvi, S., & Summers, L. (2013). An avalanche is coming: Higher education and the revolution ahead. Institute for Public Policy Research, London, UK. http://www.ippr.org/publication/55/10432/an-avalanche-iscoming-higher-education-and-the-revolution-ahead

Bolliger, D. U. & Wasilik, O. (2009). Factors influencing faculty satisfaction with online teaching and learning in higher education. Distance Education, *30*(1), 103–116 Retrieved from http://www.tandfonline.com/loi/cdie20

Chinamasa, E. (2015). Development of lecturer research skills in higher education institutions: case of mentoring at Mentors University in Zimbabwe (Doctoral dissertation). http://uir.unisa.ac.za/bitstream/handle/10500/18812/thesis_chinamasa_e.pdf?sequence=1 &isAllowed=y

Donwa, P. A. (2006, November). Funding of academic research in Nigerian universities. In Presentation at UNESCO Forum on Higher Education, Research and Knowledge (Vol. 29). https://pdfs.semanticscholar.org/7dd4/6f02193faae9cacfbc26fe4f1f83a385d3a8.pdf

Ewodage, R. (2020). Nigeria Records 454 New COVID-19 Cases, Total Infections Rise To 27,564. TheChannels Television News Online, July 03, 2020. Retrieved from https://www.channelstv.com/2020/07/03/breaking-nigeria-records-454-new-covid-19-   cases-total-infections-rise-to-27564/

Means, B., Toyama, Y., Murphy, R. & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers College Record*, *115*(3), 1- 47.

Oladele, J.I, Koledafe, O.S. & Daramola, D.S. (2021). Prospects for Online Instructional Delivery Using   Google Classrooms: Implications for Higher Education in Sub-Sahara Africa. *Journal of Digital Learning and Education, 1*(3), 92-108. http://dx.doi.org/10.52562/jdle.v1i3.227

Oyeniran, O. A., Oyeniran, S. T., Oyeniyi, J. O., Ogundele, R. A. & Ojo, A. O. (2020). E-Learning: Advancement in Nigerian   Pedagogy   Amid   Covid-19   Pandemic. https://www.researchgate.net/publication/341135283

Palloff, R. M. & Pratt, K. (2013). *Lessons from the virtual classroom: the realities of online teaching*. John Wiley & Sons.

Reuters (2020). WHO says pandemic 'far from over' as daily cases hit a record high. The East   African June 09, 2020. https://www.theeastafrican.co.ke/scienceandhealth/WHO-   says-   pandemic-far-from-over/3073694-5573274-1g4phoz/index.html

Siemens, G., & Matheos, K. (2012). Systemic changes in higher education. *In education,16*(1),   3-18.

Steward, K. (2020). SARS-CoV-2 is Re-emerging Following the Relaxation of Lockdown Restrictions. Technology Networks Group June 18, 2020. https://www.technologynetworks.com/drug-discovery/articles/sars-cov-2-is-re-emerging-following-the-relaxation-of-lockdown-restrictions-336296