

LECTURER'S MASTERY OF ONLINE LEARNING SKILLS AND STUDENTS' ENGAGEMENT IN HIGHER INSTITUTIONS IN LAGOS STATE

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Abstract

This study investigated lecturers' mastery of online learning skills and its influence on students' engagement in higher institutions within Lagos State. The research was guided by two research questions focusing on the platforms commonly used by lecturers, and the challenges affecting online instruction. The null hypothesis assumed no significant correlation between lecturers' mastery of online teaching skills and student engagement. The primary purpose was to determine how digital competence and pedagogical expertise shape students' cognitive, emotional, and behavioral participation in virtual learning environments. The study adopted a descriptive survey research design, which enabled the collection of quantitative data on lecturers' experiences with online learning platforms. A simple random sampling technique was employed to select 150 lecturers from higher institutions across Lagos State. Data were gathered through structured questionnaires and analyzed using descriptive and inferential statistics to measure relationships between lecturers' digital mastery and students' engagement, while also testing the stated hypothesis. Findings revealed that Zoom, Google Classroom, and WhatsApp/Google Meet were the most widely used platforms. However, the results indicated no significant correlation between lecturers' mastery of online learning skills and student engagement, thereby supporting the null hypothesis. Challenges such as poor internet connectivity, inadequate institutional support, and

limited resources were identified as major barriers to effective online teaching. The study recommends continuous professional development for lecturers in digital pedagogy, investment in infrastructure, and institutional support mechanisms to foster more effective and engaging online learning environments in Nigerian higher institutions.

Introduction

The rapid introduction of digital technology in the higher education industry has had far-reaching implications on how teaching and learning takes place worldwide. Applications like Zoom, Google Classroom, Microsoft teams, and even Moodle have become the critical platforms of educational delivery, particularly in the wake of the COVID-19 pandemic (Adedoyin and Soykan, 2020). Such e-learning has gained a foothold in the learning system in higher institutions in Lagos State like the rest of the world.

In spite of these technological developments, online education success highly depends on how the teacher can skillfully navigate and use these online tools. Effective online learning does not just involve the provision of course materials, but also requires the introduction of new teaching methods involving the active participation of students. It involves the creation of an active learning environment based on multimedia materials, interactive dialogues, and timely feedback that is essential in improving the level of student engagement and in retaining students (Bozkurt and Sharma, 2020).

Nevertheless, lack of ability by lecturers to use these digital tools effectively can cause demotivation of students. When lecturer competence is low it is usually associated with low student participation and engagement which eventually leads to low academic achievement. It is therefore necessary to invest in professional development among educators in order to facilitate a stronger online learning experience that not only facilitates active learning but also the academic success of the students.

Research has established that online education has cognitive, behavioral, and emotional aspects among the students (Fredricks, Blumenfeld, and Paris, 2004). This implies that learners have to contend with the learning content at an intellectual level as well as actively react to diverse interventions in the learning process, which makes the learning process more comprehensive. Nonetheless, different obstacles prevent the effectiveness of lecturers in Nigeria to facilitate this

kind of engagement. It is important to note that lack of training in online instructional strategies, opposition to a change in the traditional teaching paradigm and lack of institutional support are major factors that hinder the encouragement of active learning practices.

The lack of proper infrastructural facilities in Lagos State and the whole of Nigeria is a significant challenge to successful online education. Poor internet connectivity, frequent power cuts, and access to the much needed digital devices plague many teachers and learners. Such problems introduce inequalities across the institutions and students as pointed out by Eze, Chinedu-Eze, and Bello (2018). Such inequalities are indicators of a growing digital divide that endangers the inclusiveness and sustainability of online learning, especially in developing settings where the vast majority of students might not have access to the resources to participate in online learning.

In addition, the experience of lecturers in using technology is also a decisive factor in the success of online learning. Studies have shown that the degree of teacher proficiency in the area of technology combination is a direct indicator of student engagement and learning results (Koehler and Mishra, 2009). Although the role of technology in education has been established, a significant proportion of lecturers in institutions of higher learning in Nigeria still uphold the traditional teaching and learning systems, which prevents the dynamic learning experience that online learning offers.

In the same way, as teacher knowledge and attitudes about environmental issues play a very strong role in fostering environmental literacy in science classrooms, lecturer digital literacy and attitudes play a great role in the success of online learning programs. The development of positive attitudes towards technology, as well as the presence of an effective knowledge of digital tools, would help virtual classrooms to become dynamic and interactive and encourage cooperation, critical thinking, and student satisfaction (Martin and Bolliger, 2018). Thus, it is important that such barriers are mitigated and lecturer training on digital capabilities improved to enable the creation of a more interactive and productive online educational experience in Nigeria.

Professional development of lecturers is a need that has become a necessity in the current education environment. In a bid to enable the lecturers to succeed in adopting online teaching methodologies, special training programs are required. These initiatives particularly aim at upgrading digital pedagogy, new assessment practices and effective content delivery approaches that accommodate different learner requirements. In the absence of this necessary aid, the institutions of higher

learning in Nigeria are at risk of creating an even greater distance between the changing demands of the students and the archaic teaching methods that are still in place in institutions, which can easily affect the entire learning process.

The objective of the paper is to elaborate on the digital skills of lecturers in higher institutions in Lagos State, their perceptions and attitudes towards online learning environment. It will also examine the different obstacles that slow down the process of technological based instructions adoption. Through examination of such important aspects, the research aims at contributing meaningful information that will inform the policymakers in the education sector. Finally, the findings will be used to improve lecturer training programs and enhance student participation in online learning environments across Nigeria so that academic staff and students are fully prepared to meet the challenges of the contemporary education.

Research Questions

The following questions guided the study;

1. What online learning platforms are being utilized by lecturers in higher institutions in Lagos State?
2. What challenges do lecturers in higher institutions of Lagos State encounter during their online learning sessions?

Research Hypothesis

The following were made as tentative conclusions to the study;

H₀: There is no significant relationship between lecturers' mastery of online learning skills and students' engagement in higher institutions.

Research Methodology

This paper utilized the descriptive survey research design that helped the researcher to get the views, attitudes, and beliefs of the respondents in regard to the issue being investigated. The design was deemed to be suitable since the design offers a methodical manner of illustrating characteristics of a population by using questionnaires as the primary data collection tool.

The sample used in the study consisted of higher institutions lecturers in the state of Lagos. In order to have a fair representation, a multistage sampling technique was used. The first stage

involved the random selection of three universities of Lagos State. The second step was choosing five representatives of different areas of academic activity in each university. In the third step, ten lecturers were selected at random in each of the faculties and fifty lecturers per university were selected with a total of one hundred and fifty (150) lecturers. This approach increased the representativeness of the sample since it was possible to select randomly at the institutional, faculty, and departmental levels. The data collection tool was a structured questionnaire, which was called Lecturers Mastery of Online Learning Skills and Students Engagement Questionnaire (LMOSEQ) and modified after Daniels and Uba (2025). The questionnaire consisted of five sections, Section A, devoted to the demographic data of the respondents like gender, and Sections B, C, D, and E, included fifteen questions concerning the variables of the study. The items were developed in a four point Likert-Scale between Strongly Agree (SA) and Strongly Disagree (SD).

To establish the validity of the instrument, they were also administered to the supervisor of the researcher and other educational research experts in terms of face- and content validation. The final draft of the instrument included their observations and their suggestions. The instrument was tested on a pilot study involving twenty lecturers not in the main sample to find out their reliability. Pearson Product Moment Correlation (PPMC) was used to analyze data of the pilot test, and a Cronbachs alpha reliability coefficient of 0.82 was obtained, which showed high consistency.

The study used the administration of the questionnaire using Google Forms to collect primary data as it was easy to distribute and retrieve. The respondents were instructed on how to fill the questionnaire and the responses were collected electronically to be analyzed.

Both descriptive and inferential statistics were used in analyzing the data collected. The demographic characteristics of the respondents were described using percentages and frequency counts, and Pearson Product Moment Correlation was the test of hypotheses of the study. The statistical analyses were all performed by the Statistical Package of Social Sciences (SPSS).

Analysis of Data

Research Question One

What online learning platforms are being utilized by lecturers in higher institutions in Lagos State?

Table 4.4: Online Platforms Utilised

	N	Mean	Std. Deviation
Use Zoom	150	3.32	.814
Use Google Classroom	150	3.08	.879
Moodle adopted	150	2.76	1.021
Use multiple platforms (WhatsApp/Meet/Edmodo)	150	3.31	.843
Valid N (listwise)	150		

Table 4.4 reveals information about the online learning platforms that are available to the lecturers in higher institutions within Lagos State. These findings reveal that Zoom (Mean = 3.32, SD = 0.814) and several platforms like WhatsApp, Google Meet and Edmodo (Mean = 3.31, SD = 0.843) were the most utilized and Google Classroom followed right behind (Mean = 3.08, SD = 0.879). The lowest use of Moodle was recorded (Mean = 2.76, SD = 1.021). It means that in spite of numerous types of platforms being used by lecturers to teach, the real-time interactive (Zoom, multiple-platform combos) are more widely used than structured learning management systems (Moodle).

Research Question Two

What challenges do lecturers in higher institutions of Lagos State encounter during their online learning sessions?

Table 4.5: Challenges Faced By Lecturers

	N	Mean	Std. Dev.
Poor internet connectivity	150	3.45	.756
Power outages.	150	3.27	.911
Students disengage due to technical issues.	150	3.21	.887
Inadequate support from the institution's ICT unit.	150	2.85	1.085

Insufficient funds for data subscriptions and online tools.	150	3.28	.883
Students unfamiliarity with online platforms.	150	3.13	.900
Limited training opportunities to improve online teaching skills.	150	2.90	1.022
Difficulty in assessing students effectively	150	2.95	1.015
Increased workload	150	3.35	.891
Ensuring academic integrity	150	3.09	.948
Difficulty in maintaining students' attention.	150	3.19	.915
Technical glitches.	150	3.46	.765
Feeling of isolation from students.	150	2.78	1.117
Navigating multiple platforms creates additional stress.	150	3.13	.981
Lack of face-to-face interaction.	150	3.34	.834
Valid N (listwise)	150		

Table 4.6 illustrates difficulties encountered by lecturers with respect to online learning in the higher institutions within the Lagos State. The findings reveal the highest challenges to be Technical glitches, (Mean = 3.46, SD = 0.765) and Poor internet, (Mean = 3.45, SD = 0.756) followed by, Increased workload, (Mean = 3.35, SD = 0.891), Lack of physical interaction, (Mean = 3.34, SD = 0.834). Challenges like Power outage, (Mean = 3.27), Insufficient funds for subscriptions, (Mean = 3.28), Technical Issues on students' part, (Mean = 3.21) were also rated to be relatively high, Isolation from students, (Mean = 2.78, SD = 1.117) ranked as the least reported challenge. In general, these results indicate that lecturers are encountered with various challenges, and some of them are more consistently important than others.

Research Hypothesis

H₀1: There is no significant relationship between lecturers' mastery of online learning skills and students' engagement in higher institutions.

Table 4.6: Relationship Between Mastery and Engagement

Correlations

			MeanMastery	MeanStudEng
PPMC	MeanMastery	Correlation Coefficient	1.000	.028
		Sig. (2-tailed)	.	.738
		N	150	150
	MeanStudEng	Correlation Coefficient	.028	1.000
		Sig. (2-tailed)	.738	.
		N	150	150

**Key: MeanMastery = Mean of Lecturers' Mastery; MeanStudEng = Mean of Student Engagement*

Table 4.6 can be used to develop the null (H01) hypothesis that there exists no significant correlation between lecturers gaining command of online learning skills, and student engagement in higher institutions. Since the analysis uses the pearson product moment correlation test, there is a positive and very weak relationship ($r = 0.028$) with p-value of 0.738, which is above the significance level (0.05). As the relationship is not statistically significant then the null hypothesis is retained. It implies that the extent to which lecturers master online learning skills is not a dominant factor in online engagement of students in the study.

Discussion of Findings

Based on the result of the research study, the mastery of online learning practices by the lecturers has no substantial impact on students during online classes based on the weak positive relation ($r = 0.028$, $p = 0.738$). It implies that the greater the degrees of mastery of online tool and platforms used in teaching, the greater the degree of student engagement was not necessarily observed in the sampled institutions. Although the lecturers might be well-versed with the ability to use different platforms of learning through the online method, the result suggests that the engagement of the students lies in other areas than the proficiency of using such platforms, including the motivation of students, access to the internet, and teaching strategies. This is unlike the assumptions that directly involve student participation and interaction in online learning that can be enhanced by only improving the digital mastery of lecturers.

Partially, there is agreement and disagreement when related to Daniels and Uba (2025). They reported moderate levels of engagements (62%), moderate levels of understandings (58%) in the learning activity in the online medium and also noted that the urban students performed much better than the rural students because of accessibility to more infrastructural facilities and the teacher competence. Although their findings support the idea that connectivity and ICT competence influence engagement, the present study shows that engagement does not necessarily occur even when lecturers are adept in mastering the online practices. The discrepancy could be explained by the differences in context networks: the setting of Daniels and Uba is influenced by the lack of a coherent infrastructural network and uneven access to the digital world, whereas the context of the current study concentrates on the direct correlation between mastery and the engagement, demonstrating that engagement is a more multifaceted outcome with several variables interacting with each other.

The responses are also in tandem with those made by Aidoo et al. (2022) which indicated a relatively high grade of ICT knowledge in the teachers, yet they usually lacked any pedagogical application in virtual teaching. In their study, ICT training and previous experience had no significant role in predicting competence in providing online lessons implying that knowledge and skill are not always a guarantee of effective classroom performance. This aligns with the prevailing evidences, whereby, the excellency of lecturers failed to make significant changes in student engagement. It highlights the fact that the theoretical proficiency in the use of online platforms without successful implementation into effective teaching practice could not support the engagement of students in online learning. Educational relevance and inter-engaging teaching are still important to the translation of a technical understanding into a meaningful interaction.

Inadequacy of connectivity, resource constraints, and problems related to the platform (Table 4.6) also provide reasons why mastery would not necessarily ensure student engagement. Like what Daniels and Uba (2025) discovered, that effectiveness of learning is limited by lack of internet access (68%) and sufficient ICT competence (60%), the current study implies that the barrier in influencing the learning process by the mastery of lecturers tends to be blocked by systemic obstructions. In cases where lecturers are well trained but students are constantly facing network inconsistencies, the inability to access internet-enabled devices or limited digital literacy, engagement may be minimal regardless of the experience of those giving a lecture or lesson. This

reflects the need to view the wider teaching and learning environment in relation to engagement outcomes.

In general, the research will contribute to the current body of knowledge because it demonstrated that the digital mastery of lecturers, although significant, does not represent a sufficient condition defining the engagement of students in the realm of online learning. Whereas Daniels and Uba (2025) stress on the disparities on infrastructural and regional level and Aidoo et al. (2022) note the lack of ICT knowledge and the pedagogical implementation gap, the given results support the idea of a multidimensional approach. Increasing the participation of online learning involves more than a mere mastery, but rather an infrastructural investment, hands-on training and pedagogy, institutional support, and student-related strategies on motivation and access. It is impossible to get the expected results related to student engagement without incorporating these factors along with mastery.

Conclusion and Recommendation

The researchers found that as much as lecturers in the higher institutions in Lagos State are keen on using different online platforms including Zoom, Google Classrooms, Moodle, and WhatsApp, their technical expertise in the use of these platforms does not have a significant implication on the engagement of the students. Rather, the stability of the internet, access to digital devices and the motivation of students is more decisive in meaningful participation. Ongoing difficulties such as low connectivity, lack of infrastructures and insufficient ICT skills reflect the same issue cited in the literature and indicate that online education cannot work without a wider systemic and institutional agenda. Therefore, competence of lecturers is not enough, to achieve sustainability in online learning, three things must be invested together, which are, infrastructure, student preparedness and institutional capability.

On the basis of these results, the study proposes an overall approach to empower online education. The main measures are extending pedagogical training of lecturers on ICT other than technical skills, enhancing digital infrastructure, including internet and dependable electricity as well as a strong system of institutional support. Universities also need to promote interactive learning methods that are student-centered such as group projects, breakout work, and real time feedback to improve engagement. Moreover, digital inclusion should be encouraged through policy and funding interventions, particularly, in institutions that are under-resourced. Finally, to realize its

potential in online education in Lagos State, stakeholders should combine technological, pedagogical, and policy-driven activities that will help to provide sufficient support to lecturers and students.

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