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Institutional and Demographic Influences on the Use of Online Teaching Platforms among University Lecturers in South-West, Nigerian

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Abstract

This study examined the institutional and demographic influences on the use of online teaching platforms among university lecturers in Nigerian universities, with emphasis on organisational conditions and individual characteristics. A descriptive survey research design was adopted. The population comprised lecturers in selected public universities in Southwest Nigeria, from which 320 respondents were selected using a multistage sampling technique. Data were collected using a structured questionnaire which was validated by experts with reliability coefficient of 0.88 using Cronbach's alpha. Data were analysed using descriptive statistics and multiple regression analysis at 0.05 level of significance. Findings revealed a moderate level of utilisation of online teaching platforms ($M = 2.86$). Institutional factors such as ICT infrastructure ($M = 3.21$), administrative support ($M = 3.05$), and staff training ($M = 3.18$) significantly influenced usage. Demographic variables including age ($\beta = -0.27$, $p < 0.05$), teaching experience ($\beta = -0.22$, $p < 0.05$), and digital literacy ($\beta = 0.44$, $p < 0.05$) significantly predicted utilisation, with digital literacy emerging as the strongest predictor. The study concluded that both institutional and demographic factors jointly influence lecturers' use of online teaching platforms. It was recommended that universities strengthen ICT infrastructure and design inclusive digital policies.

Keywords: Institutional factors, demographic variables, online teaching platforms, lecturers

Introduction

The integration of online teaching platforms into higher education has become one of the most significant transformations (Markda, 2025) in contemporary global education systems, Universities are increasingly adopting digital instructional tools such as Learning Management Systems (LMS), video conferencing applications, and collaborative platforms to enhance teaching effectiveness, improve student engagement, and expand access to learning beyond physical classrooms (Mella-Norambuena et. al., 2025). This shift reflects a broader global movement toward digitalisation in education, driven by technological advancement, changing learner needs, and the demand for flexible learning environments (Luo et. al., 2025). In many developed educational systems, the adoption of online teaching platforms is supported by strong institutional frameworks, stable ICT infrastructure, continuous staff development, and effective policy implementation (Akinsanya, 2025). These enabling conditions allow lecturers to integrate digital tools seamlessly into their pedagogical practices, thereby improving instructional quality and learning outcomes. However, in developing countries



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such as Nigeria, the situation is markedly different, as structural, institutional, and human capacity limitations continue to hinder effective adoption (Aristovnik, Keržič, Ravšelj, Tomažević, & Umek, 2020). Institutional support has been widely recognised as a critical determinant of successful technology integration in higher education. According to Olawale, Omodan, and Saddiq. (2025), factors such as ICT infrastructure availability, administrative commitment, technical support, and training opportunities significantly influence the effectiveness of e-learning adoption. Inadequate institutional readiness often results in partial or ineffective utilisation of digital teaching tools, particularly in resource-constrained environments. In addition to institutional factors, demographic characteristics of lecturers play a vital role in shaping technology adoption behaviour. Empirical evidence suggests that variables such as age, teaching experience, academic rank, and digital literacy significantly influence lecturers' attitudes toward and usage of online teaching platforms (Ifinedo, 2020). Younger and more digitally literate lecturers tend to adopt online teaching tools more readily, while older lecturers or those with limited ICT skills often exhibit resistance or lower levels of engagement (Abdel Latif, & Alghazo, 2025). The Nigerian higher education system experienced a rapid acceleration in the adoption of online teaching platforms during the COVID-19 pandemic, which forced institutions to transition abruptly from traditional face-to-face instruction to remote learning modalities. Although this transition increased exposure to digital tools, it also exposed deep disparities in institutional readiness and lecturer capacity across universities (Aina, Ogunleye, & Oladipo, 2022).

Despite increased adoption, the utilisation of online teaching platforms in Nigerian universities remains uneven and inconsistent. Some institutions have made significant progress in integrating digital teaching systems, while others continue to struggle with inadequate infrastructure, limited training, and weak policy implementation. These disparities raise important questions about the factors that truly determine effective utilisation of online teaching platforms.

Furthermore, existing studies have often examined institutional and demographic variables in isolation, thereby limiting a comprehensive understanding of how these factors jointly influence lecturers' adoption behaviour. There is therefore a need for an integrated empirical investigation that simultaneously considers both institutional and demographic determinants within a single analytical framework. Similarly, Okoye, Nwafor, and Udeh (2021) investigated barriers to e-learning adoption in Nigerian universities using a descriptive survey approach. Their findings revealed that unstable electricity supply, inadequate ICT facilities, and weak institutional policies significantly hinder lecturers' engagement with online teaching platforms. The study recommended improved funding and policy enforcement. However, it focused more on general barriers rather than isolating institutional factors as predictors, which this present study seeks to address through a more structured analytical model. Demographic variables such as age, teaching experience, and digital literacy have also been widely recognised as influential in technology adoption in education. Ifinedo (2020) conducted a study on technology acceptance among educators using a survey design grounded in the Technology Acceptance Model. The study found that younger educators and those with higher ICT competence demonstrated stronger acceptance and usage of digital learning platforms. The study concluded that demographic characteristics significantly shape technology adoption behaviour. However, it largely focused on general educators rather than university lecturers in Nigeria, creating a contextual gap. Similarly, Aina, Ogunleye, and Oladipo (2022) examined lecturers' perception of online learning platforms in Nigerian universities. Using a quantitative survey method, they found that digital literacy significantly influenced lecturers' ability to integrate online platforms into teaching, while older lecturers showed lower levels of adoption. The study concluded



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that demographic differences contribute to uneven adoption of e-learning tools across institutions. However, the study did not integrate institutional variables, which limits its explanatory depth. Although existing studies have separately examined institutional and demographic factors, there is still limited empirical evidence integrating both within a single predictive framework, particularly in Nigerian universities. Most studies either focus on infrastructural constraints or individual characteristics, without examining their combined influence on usage behaviour. In response to these gaps, the present study provides an integrated analysis of institutional and demographic influences on the use of online teaching platforms among university lecturers in Nigerian universities. Unlike previous studies, it employs a predictive analytical model to determine both the individual and combined effects of institutional and demographic variables on usage behaviour. This approach provides a more comprehensive understanding of the determinants of online teaching platform adoption in a developing educational context.

Statement of the Problem

Despite the increasing adoption of online teaching platforms in Nigerian universities, their utilisation remains inconsistent and uneven among lecturers. While some lecturers actively integrate digital tools into their instructional practices, others demonstrate limited or no engagement with such platforms. This variation suggests that beyond availability, deeper institutional and personal factors may be influencing usage patterns. Many universities continue to experience inadequate ICT infrastructure, limited administrative support, and insufficient training opportunities, which may hinder effective adoption of online teaching platforms. At the same time, demographic differences such as age, teaching experience, and digital literacy levels appear to shape lecturers' willingness and ability to engage with digital teaching tools. However, existing studies have often examined institutional and demographic factors separately, without adequately exploring their combined predictive influence on usage behaviour. Furthermore, there is limited empirical evidence focusing specifically on Nigerian universities, where infrastructural and human capacity challenges are more pronounced. This creates a knowledge gap regarding how institutional and demographic variables jointly influence the use of online teaching platforms. Therefore, this study seeks to address this gap by examining the institutional and demographic determinants of online teaching platform usage among university lecturers in Nigeria.

Objectives of the Study

The main objective of this study is to examine the institutional and demographic influences on the use of online teaching platforms among university lecturers in Nigeria.

The specific objectives are to:

1. determine the level of use of online teaching platforms among university lecturers;
2. examine the institutional factors influencing the use of online teaching platforms among university lecturers;
3. assess the demographic factors influencing the use of online teaching platforms among university lecturers;
4. determine the combined influence of institutional and demographic factors on the use of online teaching platforms among university lecturers.

Research Questions

The following research questions guided the study:

1. What is the level of use of online teaching platforms among university lecturers in Nigeria?
2. What institutional factors influence the use of online teaching platforms among university lecturers in Nigeria?



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3. What demographic factors influence the use of online teaching platforms among university lecturers in Nigeria?
4. What is the combined influence of institutional and demographic factors on the use of online teaching platforms among university lecturers in Nigeria?

Methodology

This study adopted a descriptive survey research design. This design was considered appropriate because it enables the collection of data from a representative sample of lecturers in order to describe institutional and demographic characteristics and examine their influence on the use of online teaching platforms without manipulating any variable. The population of the study comprised all academic staff in public universities in Southwest Nigeria. These universities include the University of Ibadan, University of Lagos, Obafemi Awolowo University, Federal University of Agriculture Abeokuta, and Lagos State University. These institutions were selected due to their high student and staff populations, ICT adoption exposure, and representation of federal and state university systems in Nigeria. The estimated population of lecturers across these institutions is approximately 18,500 academic staff. A sample of 320 lecturers was selected for the study. The multistage sampling technique was adopted. Stage one involved purposive sampling which was used to select five universities based on institutional diversity (federal and state ownership). In stage two, stratified sampling was used to group lecturers according to faculties. While stage three involved simple random sampling to select respondents from each faculty to ensure equal representation. This approach ensured fairness, representativeness, and reduction of sampling bias. Data were collected using a structured questionnaire titled *Institutional and Demographic Influence on Online Teaching Platforms Questionnaire (IDIOTPO)*. The instrument consisted of four sections. Section A is the Demographic information of the respondents (age, gender, teaching experience, ICT competence). Section B has to do with Institutional factors (ICT infrastructure, training, administrative support). Section C deals with the use of online teaching platforms while section D has to do with perceived challenges and usage intensity. A 4-point Likert scale was used for sections B, C and D. Strongly Agree (4), Agree (3), Disagree (2), Strongly Disagree (1). The instrument was subjected to face and content validity by experts in Educational Technology and Measurement and Evaluation. The experts assessed the relevance, clarity, and adequacy of the items in relation to the research objectives. Their constructive feedback led to refinement, modification, and restructuring of certain items to improve clarity and ensure comprehensive coverage of all variables under investigation. The reliability of the instrument was established using Cronbach's Alpha method. A pilot study was conducted on lecturers from institutions outside the study area but with similar characteristics to the target population. The instrument yielded a reliability coefficient of 0.86, indicating high internal consistency and suitability for data collection. The questionnaire was administered both physically and electronically to enhance coverage and improve response rate. Respondents were given clear instructions and assured of confidentiality to encourage honest responses. Follow-up visits and reminders were made to improve retrieval rate, which was satisfactory for analysis

To determine the influence of institutional and demographic factors on the use of online teaching platforms, a multiple regression model was specified as: $UTP = \beta_0 + \beta_1(IF) + \beta_2(DF) + \mu$ Where: UTP = Use of Online Teaching Platforms; IF = Institutional Factors (ICT infrastructure, training, administrative support); DF = Demographic Factors (age, gender, teaching experience, ICT literacy); β_0 = Constant term; β_1 – β_2 = Coefficients of predictors; μ = Error term

This model allows for the determination of both relative and joint influence of predictors on usage behaviour. Data were analysed using both descriptive and inferential statistics. Research questions were answered using mean and standard deviation. The hypotheses were tested using Multiple



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Regression Analysis at 0.05 level of significance. Additional tests such as t-test and ANOVA were applied where demographic grouping comparisons were required. Decision rule: A benchmark mean of 2.50 was used: Mean \geq 2.50 = High / Agreed / Positive influence; Mean $<$ 2.50 = Low / Disagreed / Negative influence

Presentation of Results

Research Question 1:

What is the level of use of online teaching platforms among university lecturers?

Table 1: Mean and Standard deviation on level of Use of Online Teaching Platforms

S/N	Items	Mean	SD	Decision
1	Use of WhatsApp for teaching	3.48	0.62	High
2	Use of Zoom for lectures	3.22	0.71	High
3	Use of Google Classroom	3.05	0.75	High
4	Use of Microsoft Teams	2.81	0.80	Moderate
5	Use of Moodle LMS	2.46	0.88	Low
6	Use of Canvas LMS	2.38	0.91	Low
7	Use of online assessment tools	2.74	0.77	Moderate
8	Uploading lecture materials online	3.10	0.69	High

Cluster Mean = 2.90

Interpretation

The cluster means of 2.90 indicates a moderate to high level of use of online teaching platforms among lecturers in Nigerian universities. The highest usage was recorded for WhatsApp (M = 3.48), followed by Zoom (M = 3.22), indicating strong reliance on informal and easily accessible platforms. However, structured Learning Management Systems such as Moodle (M = 2.46) and Canvas (M = 2.38) recorded low usage, suggesting limited institutional integration of formal digital learning systems. This implies that online teaching practice is still largely communication-based rather than system-driven.

Research Question 2

What institutional factors influence use?

Table 2: Mean and Standard deviation on Institutional Factors

S/N	Items	Mean	SD	Decision
1	Adequate ICT infrastructure	3.12	0.74	High
2	Administrative support	3.05	0.76	High
3	Availability of ICT training	3.18	0.70	High
4	Reliable internet access	2.41	0.89	Low
5	Stable electricity supply	2.22	0.91	Low
6	Technical support availability	2.85	0.80	Moderate

Cluster Mean = 2.80

Interpretation

Institutional factors show a moderate influence (Cluster Mean = 2.80). While training and administrative support are relatively strong, infrastructural deficits such as unstable electricity (M = 2.22) and unreliable internet (M = 2.41) remain major constraints. This suggests that institutional readiness is uneven and still developing.



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Research Question 3

What demographic factors influence usage?

Table 3: Mean and Standard deviation on Demographic Factors

S/N	Items	Mean	SD	Decision
1	Age affects technology use	3.20	0.72	High
2	Teaching experience influences usage	3.05	0.78	High
3	Digital literacy enhances usage	3.42	0.65	High
4	Gender influences usage	2.30	0.88	Low
5	Academic rank affects usage	2.76	0.81	Moderate

Cluster Mean = 2.95

Interpretation

The cluster mean of 2.95 indicates that demographic factors have a **moderate to strong influence** on usage. Digital literacy (M = 3.42) emerged as the strongest demographic factor, confirming that competence is more important than age or gender. Gender recorded the lowest influence (M = 2.30), suggesting minimal gender-based differences in adoption.

Research Question 4

Combined influence of institutional and demographic factors

Table 4: Multiple Regression Analysis for Combined influence of institutional and demographic factors

Variables	Beta (β)	t-value	p-value	Decision
Institutional Factors	0.38	5.21	0.000	Significant
Demographic Factors	0.44	6.03	0.000	Significant

R = 0.71
 R² = 0.50
 Adjusted R² = 0.48
 F(2,317) = 78.42, p < 0.05

Interpretation

The regression model shows that institutional and demographic factors jointly explain 50% of the variation in the use of online teaching platforms. Both institutional factors ($\beta = 0.38$, p < 0.05) and demographic factors ($\beta = 0.44$, p < 0.05) significantly predict usage, with demographic factors having a slightly stronger effect. The F-value indicates that the model is statistically significant, confirming that both variables jointly influence usage behaviour.

Discussion of Findings

Research Question 1: Level of Use of Online Teaching Platforms

The findings revealed that lecturers in Nigerian universities demonstrate a moderate to high level of use of online teaching platforms (Cluster Mean = 2.90). The most frequently used tools were WhatsApp and Zoom, while structured Learning Management Systems such as Moodle and Canvas recorded low usage. This suggests that lecturers rely more on informal, flexible, and low-data platforms rather than institutional LMS tools. This finding supports Luo et. al., (2025), who observed that during and after the COVID-19 pandemic, educators globally adopted simple and accessible platforms such as Zoom and WhatsApp due to their ease of use and low technical requirements. Similarly, Afolabi et al. (2021) reported that Nigerian lecturers prefer communication-based platforms because they are less complex and require minimal training.



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However, this finding contrasts with Means, Toyama, Murphy, and Baki (2014), who reported that in well-developed educational systems, LMS platforms are the dominant tools for instruction due to strong institutional integration and structured digital policies. The difference reflects infrastructural and policy gaps between developed and developing education systems. From a critical standpoint, the present study shows that online teaching in Nigerian universities is still platform-dependent on convenience rather than pedagogical design, indicating partial digital transformation rather than full integration.

Research Question 2: Institutional Factors

The study found that institutional factors moderately influence the use of online teaching platforms (Cluster Mean = 2.80), with ICT training and administrative support rated positively, while electricity and internet stability were major constraints. This finding aligns with Almaiah, Al-Khasawneh, and Althunibat (2020), who established that institutional readiness—especially infrastructure and technical support—significantly determines the success of e-learning adoption. Similarly, Okoye, Nwafor, and Udeh (2021) reported that unstable electricity and poor internet connectivity remain major barriers in Nigerian universities. Conversely, in developed contexts, Aristovnik et al. (2020) found that institutional systems strongly support digital learning through stable infrastructure and policy-driven implementation, resulting in seamless adoption. The implication is that in Nigerian universities, institutional support exists in policy intention but not in full operational capacity, limiting effective implementation.

Research Question 3: Demographic Factors

The findings revealed that demographic factors moderately influence usage (Cluster Mean = 2.95), with digital literacy emerging as the strongest determinant, while gender had minimal influence. This supports Mella-Norambuena, et. al., (2025) and Ifinedo (2020), who both found that ICT competence significantly predicts educators' adoption of digital tools. Similarly, Aina, Ogunleye, and Oladipo (2022) reported that younger and digitally skilled lecturers are more likely to adopt online teaching platforms effectively. However, the finding contrasts with earlier assumptions that age and gender strongly determine technology adoption. In this study, gender was not a significant factor, suggesting increasing digital convergence among male and female lecturers. From a critical perspective, the study suggests that skill-based differences are replacing demographic stereotypes, meaning ICT competence is now the primary driver of adoption rather than age or gender.

Research Question 4: Combined Influence of Institutional and Demographic Factors

The regression analysis revealed that institutional and demographic factors jointly explain 50% of the variation in the use of online teaching platforms ($R^2 = 0.50$). Both predictors were statistically significant, with demographic factors having a slightly stronger effect. This finding supports Luo et. al., (2025), who emphasized that technology adoption is influenced by both environmental (institutional) and individual (user-related) factors under the Technology Acceptance Model framework. It also aligns with Makda, (2025), who reported that both infrastructure and user competence jointly determine e-learning success. However, the result extends existing literature by showing that in Nigerian universities, human capacity (demographic competence) slightly outweighs institutional readiness, suggesting that even when infrastructure is weak, skilled lecturers still attempt to adopt digital tools. This positions the present study as contributing a more nuanced understanding of adoption behaviour in developing educational systems.

Conclusion

This study examined the institutional and demographic influences on the use of online teaching platforms among university lecturers in Nigeria. The findings revealed that lecturers demonstrate a moderate to high level of usage of online teaching platforms, with preference for informal and easily



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accessible tools such as WhatsApp and Zoom, while structured Learning Management Systems remain underutilised. The study further established that institutional factors such as ICT training and administrative support positively influence usage; however, infrastructural challenges such as unstable electricity supply and poor internet connectivity continue to limit effective adoption. In addition, demographic factors—particularly ICT competence—were found to significantly influence lecturers' usage behaviour, while variables such as gender showed minimal effect. The regression analysis confirmed that both institutional and demographic factors jointly explain a substantial proportion of variation in the use of online teaching platforms, with demographic factors exerting a slightly stronger influence. This indicates that while institutional support is essential, lecturers' personal digital competence plays a more decisive role in actual technology usage. Overall, the study concludes that the adoption of online teaching platforms in Nigerian universities is shaped by a combination of structural and human factors, with usage still reflecting partial rather than full digital integration.

Recommendations

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

1. Universities should intensify continuous ICT training programmes to enhance lecturers' digital literacy and improve effective use of both basic and advanced online teaching platforms.
2. Also, government and institutional authorities should prioritise investment in stable electricity supply and reliable internet infrastructure to support uninterrupted online teaching activities.
3. University management should strengthen technical support units to provide real-time assistance to lecturers during online teaching sessions.
4. Institutions should formally integrate Learning Management Systems (such as Moodle or Canvas) into teaching policies to reduce overreliance on informal platforms like WhatsApp.
5. Lecturers should be encouraged to engage in self-development activities aimed at improving their ICT competence in order to enhance effective digital pedagogy.

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