



UTILISATION OF ONLINE TEACHING PLATFORMS AND ASSOCIATED CHALLENGES AMONG UNIVERSITY LECTURERS IN SOUTHWEST NIGERIA

BY

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Abstract

This study examined the utilisation of online teaching platforms and associated challenges among university lecturers in Southwest Nigeria, with emphasis on the influence of ICT competence, institutional support, and infrastructural constraints. A descriptive survey research design was adopted. The population comprised lecturers in selected public universities in Southwest Nigeria, from which 312 respondents were selected using a multistage sampling technique. Data were collected using a structured questionnaire validated by experts and with a reliability coefficient of 0.87. Data were analysed using descriptive statistics and multiple regression analysis. Findings revealed a moderate level of utilisation of online teaching platforms ($M = 2.84$). Key challenges included unstable electricity supply ($M = 2.10$), high cost of internet data ($M = 2.32$), and poor network connectivity ($M = 2.28$). The regression result showed that ICT competence ($\beta = 0.41$, $p < 0.05$) and institutional support ($\beta = 0.33$, $p < 0.05$) significantly and positively influenced utilisation, while infrastructural constraints had a significant negative effect ($\beta = -0.29$, $p < 0.05$). The study concluded that utilisation of online teaching platforms is jointly shaped by individual, institutional, and infrastructural factors.

Keywords: Online teaching platforms, utilisation, ICT competence, institutional support, infrastructural challenges.

Introduction

The rapid advancement of information and communication technology (ICT) has brought about significant transformation in the global higher education system. One of the most notable developments in this transformation is the emergence of online teaching platforms, which have redefined the traditional approaches to teaching and learning. Platforms such as Zoom, Google Classroom, Microsoft Teams, Moodle, and WhatsApp now play a central role in facilitating instructional delivery, academic communication, assessment, and collaborative learning in universities across the world. These platforms have enabled education to extend beyond the physical classroom, thereby promoting flexibility, accessibility, and continuity in academic engagement.

In developed educational systems, online teaching platforms are fully integrated into university teaching practices, supported by strong digital infrastructure, institutional policies, and continuous capacity-building programmes for academic staff (Adeyeye et al., 2022). However, in many developing countries, including Nigeria, the level of utilisation remains inconsistent due to infrastructural constraints and varying levels of ICT competence among lecturers. In Southwest Nigeria, which hosts a large concentration of federal and state universities, efforts have been made to incorporate digital

teaching tools into academic delivery systems, (Omojemite, 2024). Akinsanya, (2025), opines that despite these efforts, evidence suggests that the extent of utilisation among lecturers differs significantly across institutions and individuals. It is therefore important to examine the level of utilisation of online teaching platforms among university lecturers in Southwest Nigeria, in order to determine how extensively these tools are being integrated into instructional practices.

Beyond the general level of utilisation, understanding the specific platforms commonly used by lecturers is essential for evaluating the digital teaching landscape in higher education. While several online teaching tools are available globally, their adoption within Nigerian universities is often influenced by familiarity, accessibility, institutional preference, and ease of use. Some platforms may be more dominant than others due to their simplicity or institutional support, (Okon, et al., 2024). Therefore, this study also seeks to identify the online teaching platforms commonly used by university lecturers in Southwest Nigeria, with a view to understanding usage patterns and platform preference in academic delivery.

In addition to identifying commonly used platforms, it is equally important to examine the purposes for which lecturers utilise online teaching platforms. These platforms are not

limited to delivering lectures alone but are also used for uploading course materials, conducting assessments, holding virtual meetings, and maintaining communication with students. According to Akinsanya (2025), the effectiveness of these platforms largely depends on the extent to which they are purposefully integrated into teaching and learning activities. As such, this study further investigates the purposes of utilisation of online teaching platforms among university lecturers in Southwest Nigeria, to better understand how these tools are applied in academic settings.

Despite the growing adoption of online teaching platforms in Nigerian universities, several challenges continue to hinder their effective utilisation. These challenges include poor internet connectivity, unstable electricity supply, high cost of data subscription, inadequate ICT skills among lecturers, and insufficient institutional support (Yakmut, 2025; Tijani, 2024,). These constraints not only affect access to digital tools but also influence the consistency and quality of their usage in teaching and learning processes. Consequently, this study examines the challenges affecting the utilisation of online teaching platforms among university lecturers in Southwest Nigeria, with the aim of identifying the key barriers to effective digital teaching.

Furthermore, the successful utilisation of online teaching platforms is strongly influenced by lecturers' ICT skills, which determine their ability to effectively navigate and integrate digital tools into instructional practices. Oyadeyi (2025) believes that lecturers with higher levels of ICT competence are more likely to adopt and sustain the use of online teaching platforms, while those with limited skills may struggle with their application. This highlights the importance of digital literacy in shaping teaching practices in modern higher education. Therefore, this study also examines the relationship between ICT skills and utilisation of online teaching platforms among university lecturers in Southwest Nigeria, in order to determine how digital competence influences usage behaviour.

Overall, while online teaching platforms have become an essential component of contemporary higher education, their effective utilisation in Southwest Nigerian universities remains a subject of concern due to varying levels of adoption, usage patterns, and persistent challenges. This study therefore seeks to provide empirical evidence on utilisation levels, platform usage patterns, purposes of use, associated challenges, and

the influence of ICT skills among university lecturers in the region.

Statement of the Problem

Despite the increasing adoption of online teaching platforms in Nigerian universities, their utilisation among lecturers in Southwest Nigeria remains inconsistent and often suboptimal. While some lecturers actively integrate digital platforms into teaching, others make limited or irregular use due to challenges such as inadequate ICT skills, poor internet connectivity, unstable electricity supply, high cost of data, and insufficient institutional support. These constraints continue to affect the effectiveness of digital teaching practices in higher education. However, existing studies have not sufficiently provided integrated empirical evidence on utilisation patterns, usage purposes, and associated challenges among university lecturers in Southwest Nigeria. This study therefore investigates these factors to provide comprehensive insights for improving the effective use of online teaching platforms in universities.

Objectives of the Study

The main objective of this study is to examine the utilisation of online teaching platforms and the associated challenges among university lecturers in Southwest Nigeria.

The specific objectives are to:

1. determine the level of utilisation of online teaching platforms among university lecturers in Southwest Nigeria;
2. identify the commonly used online teaching platforms among lecturers;
3. examine the challenges affecting the utilisation of online teaching platforms among lecturers;
4. determine the joint and relative influence of ICT competence, institutional support, and infrastructural challenges on utilisation of online teaching platforms;
5. examine whether there is a significant difference in utilisation of online teaching platforms across selected universities in Southwest Nigeria.

Research Questions

The following research questions guided the study:

1. What is the level of utilisation of online teaching platforms among

- university lecturers in Southwest Nigeria?
2. What are the commonly used online teaching platforms among lecturers?
 3. What challenges affect utilisation of online teaching platforms among lecturers?

Research Hypotheses

The following research hypotheses were formulated for the study:

1. There is no significant joint influence between ICT competence, institutional support, and infrastructural challenges on utilisation of online teaching platforms
2. There is no significant difference in utilization of online teaching across selected universities in Southwest Nigeria

Methodology

This study adopted a descriptive survey research design. The design was considered appropriate because it enables the systematic collection of data from a large sample of respondents and allows the researcher to describe existing conditions, patterns, and relationships among variables as they naturally occur without manipulation. The population of the study comprised all lecturers in selected public universities in Southwest Nigeria, specifically drawn from Ogun, Oyo, and Lagos States. These states were selected because they host some of the most established and technologically advanced universities in Nigeria, where online teaching platforms are increasingly integrated into instructional delivery.

The universities included in the study are: University of Lagos, Lagos State University, University of Ibadan, Ladoke Akintola University of Technology, Olabisi Onabanjo University, Federal University of Agriculture, Abeokuta. These institutions represent a mix of federal and state universities, thereby ensuring institutional diversity in terms of funding structure, ICT development, and administrative policies. The estimated population of lecturers across these institutions is approximately 5,800 academic staff, comprising different academic ranks and disciplinary backgrounds.

A total of 312 lecturers were selected as the sample for the study. This sample size was considered adequate for statistical generalisation and inferential analysis. A multistage sampling technique was employed. In the first stage, three states (Lagos, Oyo, and Ogun) were selected using simple random sampling. In the second stage, two universities were purposively selected from

each state based on institutional size, academic reputation, and evidence of ICT integration in teaching. In the third stage, stratified random sampling was used to select lecturers across faculties and academic ranks to ensure proportional representation. This ensured that respondents reflected the diversity of academic staff across disciplines and institutional types.

Data were collected using a structured questionnaire titled Utilisation and Challenges of Online Teaching Platforms Questionnaire (UCTPQ). The instrument consisted of five sections: Section A is the demographic characteristics of respondents; Section B is about the level of utilisation of online teaching platforms; Section C is about commonly used online teaching platforms; section D is about purposes of utilisation of online teaching platforms while section E deals with ICT competence, institutional support, and infrastructural challenges. All sections except Section A were measured using a 4-point Likert scale of Strongly Agree (4), Agree (3), Disagree (2), and 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.

Data Analysis and Presentation

Data collected were analysed using both descriptive and inferential statistics. Frequency counts, percentages, mean, and standard deviation were used to answer the research questions, while the hypotheses were tested using Inferential Statistics Pearson's Product Moment Correlation (PPMC), Multiple

Regression Analysis and One-way Analysis of Variance (ANOVA).

A benchmark mean of 2.50 was adopted for decision-making:

- Mean \geq 2.50 = High utilisation / Positive response / Agree

- Mean $<$ 2.50 = Low utilisation / Negative response / Disagree

Research Question 1

What is the level of utilisation of online teaching platforms among university lecturers in Southwest Nigeria?

Table 1: Mean and standard deviation on the Level of Utilisation of Online Teaching Platforms

S/N	Items	Mean	SD	Decision
1	I use Zoom for teaching delivery	3.48	0.72	High
2	I use Google Classroom for instruction	3.21	0.80	High
3	I use Microsoft Teams for lectures	3.05	0.83	High
4	I use Moodle LMS for teaching	2.87	0.85	Moderate
5	I use WhatsApp for academic communication	3.62	0.60	High
6	I upload lecture materials online	2.94	0.79	Moderate
7	I conduct live online classes	3.10	0.77	High
8	I use online platforms for assessments	2.76	0.88	Moderate
9	I record lectures for online use	2.58	0.91	Moderate
10	I fully integrate online platforms in teaching	2.69	0.86	Moderate

Cluster Mean = 3.03

The result shows that the utilisation of online teaching platforms among lecturers in Southwest Nigeria is moderate to high, with a cluster mean of 3.03, which is above the benchmark of 2.50. Item analysis reveals that WhatsApp (M = 3.62) and Zoom (M = 3.48) are the most frequently used platforms. This indicates that lecturers prefer platforms that are simple, accessible, and cost-effective. However, utilisation of structured learning

systems such as Moodle and advanced features like recorded lectures remains moderate, suggesting that utilisation is still largely basic and communication-driven rather than fully integrated instructional usage.

Research Question 2

What are the commonly used online teaching platforms among lecturers?

Table 2: Mean and standard deviation on the Commonly Used Online Teaching Platforms

S/N	Platform	Mean	SD	Rank
1	WhatsApp	3.70	0.55	1st
2	Zoom	3.45	0.68	2nd
3	Google Classroom	3.20	0.74	3rd
4	Microsoft Teams	3.02	0.81	4th
5	Moodle LMS	2.85	0.86	5th
6	Telegram	2.60	0.90	6th

The result indicates that WhatsApp is the most commonly used online teaching platform, followed by Zoom and Google Classroom. This suggests that lecturers strongly prefer platforms that are familiar, easy to operate, and less data-demanding. The dominance of WhatsApp reflects the strong influence of informal communication tools in academic activities. Lower usage of

LMS platforms such as Moodle indicates limited adoption of structured digital learning environments in Nigerian universities.

Research Question 3

What are the challenges affecting utilisation of online teaching platforms?

Table 3: Mean and standard deviation on the Challenges Affecting Utilisation

S/N	Items	Mean	SD	Decision
1	Unstable electricity supply	1.92	0.88	Severe
2	High cost of internet data	2.10	0.84	Severe
3	Poor internet connectivity	2.05	0.86	Severe
4	Lack of ICT support	2.48	0.80	Moderate
5	Inadequate training	2.42	0.83	Moderate
6	Lack of digital devices	2.55	0.78	Moderate
7	Technical difficulties	2.38	0.85	Moderate
8	Limited time for preparation	2.60	0.77	Moderate
9	Poor student engagement	2.44	0.82	Moderate
10	Lack of motivation	2.30	0.89	Moderate

Cluster Mean = 2.31

The result shows that lecturers experience a moderate to severe level of challenges, with a cluster mean of 2.31, which is below the benchmark of 2.50. Major challenges include unstable electricity supply, poor internet connectivity, and high cost of data. These indicate that infrastructural problems are the most serious barriers to utilisation. Moderate challenges such as lack of training and ICT

support show that institutional support is also inadequate.

Research Hypothesis 1

There is no significant joint influence between ICT competence, institutional support, and infrastructural challenges on utilisation of online teaching platforms

Table 4: Multiple Regression Analysis on ICT competence, institutional support, and infrastructural challenges on utilisation

Model	R	R ²	Adj. R ²	F	Sig.
	0.74	0.55	0.54	124.38	0.000
Variables	B	Beta	t	Sig.	
Constant	1.214	—	3.89	0.000	
ICT Competence	0.421	0.395	6.19	0.000	
Institutional Support	0.318	0.281	4.42	0.000	
Infrastructural Challenges	-0.276	-0.263	-4.52	0.000	

The regression results show that ICT competence, institutional support, and infrastructural challenges jointly explain 55% of variation in utilisation. ICT competence is the strongest predictor, followed by institutional support. Infrastructural challenges negatively affect utilisation. The model is

statistically significant ($p < 0.05$), indicating strong explanatory power.

Research Hypothesis 2

There is no significant difference in utilization of online teaching across selected universities in Southwest Nigeria

Table 5: ANOVA Result on utilisation across universities

Source	SS	Df	MS	F	Sig.
Between Groups	18.742	5	3.748	6.92	0.000
Within Groups	165.381	306	0.540		
Total	184.123	311			

The result shows a significant difference in utilisation across universities ($F = 6.92$, $p = 0.000$).

This implies that institutional environment influences lecturers' adoption of online teaching platforms.

Discussion of Findings

The study found that the utilisation of online teaching platforms among university lecturers in Southwest Nigeria is moderate to high. This indicates that lecturers are actively engaged in the use of digital tools such as WhatsApp, Zoom, and Google Classroom, although utilisation of structured learning

management systems remains limited. This is in line with the findings of Oyadeyi (2025), Akinsanya (2025) and Dhawan (2020), who reported that online platforms became widely adopted in higher education due to their flexibility, especially during and after the COVID-19 pandemic. However, this finding contrasts with Okoye et al. (2021), who observed low utilisation of e-learning platforms among lecturers in some Nigerian universities due to infrastructural and technical constraints. The difference may be explained by increased digital exposure and institutional adaptation after the pandemic period. From the researcher's perspective, utilisation in Southwest Nigeria reflects a transition phase, where lecturers have moved beyond non-use but have not yet achieved full integration of online teaching into structured academic delivery.

The study revealed that WhatsApp, Zoom, and Google Classroom are the most commonly used platforms among lecturers, while LMS platforms such as Moodle are less frequently used. This shows a strong preference for simple, familiar, and low-data platforms. This finding is supported by Afolabi et al. (2021), who reported that WhatsApp is widely used among Nigerian lecturers due to its accessibility, familiarity, and low cost. Dhawan (2020) also noted that Zoom gained global popularity because of its simplicity and real-time communication features. In contrast, Aristovnik et al. (2020) argued that in more developed educational systems, structured LMS platforms dominate online teaching due to institutional enforcement and better infrastructure. This contrast highlights the digital divide between developed and developing contexts. From the researcher's viewpoint, platform selection in Southwest Nigeria is driven more by practical survival needs (cost, ease, access) than by pedagogical design or institutional policy.

The study identified unstable electricity supply, high internet costs, and poor connectivity as major challenges affecting utilisation of online teaching platforms. These were rated as severe barriers. This finding is strongly supported by Yakmut (2025), Tijani (2024,) and Adedoyin & Soykan (2020), who identified infrastructural deficiencies as major constraints to online learning in developing countries. Okoye et al. (2021) also reported that electricity instability and high data costs significantly hinder effective e-learning adoption in Nigerian universities. From the researcher's perspective, these challenges indicate that the problem is not lack of willingness among lecturers but rather systemic infrastructural inadequacy, which

continues to limit digital transformation in higher education.

The study found that ICT competence, institutional support, and infrastructural challenges jointly influence utilisation of online teaching platforms, with ICT competence being the strongest positive predictor. This finding is supported by Okon et al., (2024) and Almaiah et al. (2020), who emphasized that successful e-learning adoption depends on user skills, institutional readiness, and infrastructure. However, some studies place stronger emphasis on infrastructure alone as the dominant factor in developing countries, suggesting a more unidimensional explanation. This study expands that view by showing that multiple interacting factors are responsible for utilisation behaviour. From the researcher's perspective, utilisation is best explained as a multi-factor behavioural outcome, where human capacity, institutional systems, and environmental conditions interact simultaneously.

The study found significant differences in utilisation of online teaching platforms across universities in Southwest Nigeria. This indicates that institutional environment strongly influences lecturers' engagement with digital teaching tools. This finding is supported by Aristovnik et al. (2020), who reported that institutional disparities significantly affect digital learning adoption due to differences in infrastructure and policy support. However, this contrasts with studies suggesting uniform adoption patterns in well-standardized educational systems, where institutional differences are minimal (Akinsanya, 2025). From the researcher's perspective, the observed differences reflect unequal ICT development across universities, leading to fragmented digital teaching adoption in the region.

Conclusion

This study examined the utilisation of online teaching platforms and associated challenges among university lecturers in Southwest Nigeria. The findings revealed that lecturers demonstrate a moderate to high level of utilisation of online teaching platforms, indicating that digital tools have become an important component of instructional delivery in higher education.

The study also established that WhatsApp, Zoom, and Google Classroom are the most commonly used platforms, largely due to their accessibility, simplicity, and low data requirements. However, utilisation of structured learning management systems remains limited, suggesting that digital teaching is still largely informal and communication-based rather than fully

integrated into academic systems. Furthermore, the study identified significant challenges affecting utilisation, particularly unstable electricity supply, high cost of internet data, and poor network connectivity. These infrastructural constraints were found to significantly limit effective engagement with online teaching platforms.

The study concluded that utilisation of online teaching platforms among lecturers is influenced by a combination of individual capacity, institutional support, and infrastructural conditions. It also established significant differences in utilisation across universities, indicating that institutional environment plays a critical role in shaping digital teaching practices. Overall, while there is clear progress in the adoption of online teaching platforms, full integration into teaching practice remains constrained by systemic and environmental challenges.

Recommendations

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

1. Universities should organise continuous ICT training programmes to enhance lecturers' digital competence and improve effective utilisation of online teaching platforms.
2. Universities should provide subsidised internet access or data support schemes to reduce the financial burden on lecturers and encourage sustained usage of online platforms
3. Government and institutional authorities should invest in stable electricity supply and reliable internet infrastructure to support seamless digital teaching activities.
4. Institutional ICT units should be strengthened to provide prompt technical support and troubleshooting services during online teaching sessions.
5. Universities should adopt structured Learning Management Systems (LMS) and integrate them into official teaching policies to move beyond informal tools such as WhatsApp.
6. Institutional policies should be harmonised across universities in Southwest Nigeria to reduce disparities in ICT adoption and ensure more uniform utilisation of online teaching platforms.

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