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Perception and Attitude of Undergraduates toward Online Learning Platforms in Post-Covid-19

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ABSTRACT

This study examined the perception and attitude of undergraduates toward online learning platforms (OLPs) in the post-COVID-19 era in Kwara State, Nigeria. The COVID-19 pandemic forced educational institutions to adopt virtual learning environments, making it essential to understand students' experiences because these insights are critical for improving education delivery in the new normal. A descriptive survey design was employed, and data were collected from 383 undergraduates across federal, state, and private universities selected through random sampling. A structured questionnaire measured three variables: perceived usefulness, perceived ease of use, and overall attitude toward OLPs. The findings revealed that students generally held positive perceptions and attitudes, although variations were observed based on gender and institution type because of differences in access, digital literacy, and learning environments. This study underscores the importance of inclusive digital strategies and infrastructure to support equitable and effective learning experiences across Nigeria's higher education system.

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1. INTRODUCTION

Education is widely recognized as a fundamental tool for individual advancement and societal transformation. It encompasses the dual processes of teaching and learning, where instructors communicate instructional content, and learners undergo cognitive, emotional, or behavioural transformation. Effective education equips learners with essential skills and values necessary for adapting to the demands of the modern world. Scholars emphasize that education is a lifelong activity, constantly evolving to accommodate changes in human and technological development (Ibironke *et al*., 2018). Higher education, in particular, plays a strategic role in human capital development, national progress, and global competitiveness. It serves as a platform for nurturing critical thinking, innovation, and problem-solving skills essential for building sustainable societies (Amruta *et al*., 2016).

In Nigeria, higher education is formally delivered through universities, polytechnics, colleges of education, and other specialized institutions such as Innovation Enterprise Institutions (IEIs) and Schools of Health Technology. According to the National Policy on Education, this level of education is offered after post-basic education and aims to develop intellectual capacity, vocational skills, and moral character among citizens (Mbato & Equzozie, 2024). However, the quality of learning experiences in higher education is closely linked to the accessibility and effective integration of information and communication technologies (ICT). The role of ICT has become increasingly critical in enabling flexible, inclusive, and personalized education delivery, particularly in the context of large student populations and limited physical infrastructure.

ICT encompasses a wide array of tools and platforms, including computers, smartphones, internet-based services, learning management systems, and digital collaboration tools. These resources enhance communication, foster student engagement, and support self-paced learning. ICT applications such as email, virtual classrooms, video conferencing, and cloud-based storage offer alternative methods for delivering educational content and improving student-teacher interactions (Almufarreh & Arshad, 2023). Consequently, ICT has revolutionized the way learning is delivered, assessed, and managed in academic settings. The integration of these technologies into classrooms not only increases access to educational resources but also prepares students for a technology-driven world (Saravanakumar *et al*., 2023).

Among the ICT innovations widely adopted in higher education is the Online Learning Platform (OLP). Also referred to as Learning Management Systems (LMS), Course Management Systems (CMS), or Virtual Learning Environments (VLE), OLPs are software applications that facilitate course delivery, content sharing, communication, and assessment in a virtual environment. They enable students to access learning materials, submit assignments, participate in discussions, and receive feedback from instructors, regardless of physical location. Online learning offers flexibility in terms of time and space, allowing students to engage with educational content at their convenience and pace. This makes it especially valuable for students with mobility constraints or those managing multiple responsibilities.

The adoption of online learning platforms became particularly significant during the COVID-19 pandemic. As part of public health measures to contain the spread of the virus, educational institutions worldwide suspended face-to-face instruction and transitioned to remote learning. This shift posed both opportunities and challenges for students and institutions alike. While online platforms enabled continuity in education amidst lockdowns, the sudden transition exposed gaps in digital readiness, infrastructure, and pedagogical

capacity. Students from low-resource settings, including many in Nigeria, encountered challenges such as unstable electricity, limited internet access, and lack of digital skills, thereby affecting their ability to engage effectively in online learning (Adenubi *et al*., 2025).

Despite these challenges, the post-COVID-19 era has highlighted the enduring relevance of OLPs in higher education. The shift from emergency remote teaching to more structured online education models has prompted educational stakeholders to evaluate student experiences and identify factors that influence their acceptance and usage of digital tools. Research suggests that students' perceptions and attitudes toward OLPs significantly determine the success of these technologies in educational contexts (Olafare *et al*., 2018). These constructs—perceived usefulness, perceived ease of use, and attitude—are integral components of the Technology Acceptance Model (TAM), a theoretical framework that explains users' acceptance of technology.

The TAM posits that users are more likely to adopt a technology if they believe it enhances their productivity (perceived usefulness) and is easy to operate (perceived ease of use). Attitude, in this context, refers to the user's overall disposition—positive or negative—toward using the technology. Studies have confirmed the applicability of TAM in educational technology research, indicating that students who perceive online platforms as useful and user-friendly are more likely to engage with them positively (Marjan *et al*., 2018). Additionally, research shows that gender may influence these perceptions. Men tend to emphasize the functional benefits of technology, while women are more affected by ease of use and confidence in operating digital systems (Sieverding & Koch, 2009).

Understanding students' perceptions and attitudes toward OLPs is critical, especially in the Nigerian context, where digital divides persist and educational reforms are ongoing. Gender-related differences in technology adoption have been reported in various studies. For example, male students often demonstrate greater confidence and familiarity with digital tools, while female students may face more barriers due to sociocultural factors or limited exposure (Rosenthal, 2008). However, other studies suggest that with adequate support and access to mobile devices, the gender gap in online learning participation can be minimized (Wang *et al*., 2009).

Moreover, the rise in e-learning has implications for student motivation, self-regulation, and academic performance. Online learning environments demand a higher level of independence and digital literacy from students. Some learners may find the absence of face-to-face interaction and real-time feedback to be demotivating, while others appreciate the autonomy and flexibility that virtual platforms offer. Attitudinal factors, therefore, play a pivotal role in determining students' engagement and success in online courses. A student who is enthusiastic about OLPs and trusts the platform is more likely to complete assignments, collaborate with peers, and seek support when needed.

As institutions in Nigeria and other parts of the world continue to refine their digital strategies post-pandemic, it is essential to assess the readiness and responsiveness of students to online learning. By identifying the strengths and gaps in students' experiences, universities can design more inclusive and effective digital learning environments. This involves not only investing in infrastructure and internet access but also promoting positive digital attitudes, especially among underrepresented groups.

Therefore, this study aims to examine the perception and attitude of undergraduates toward online learning platforms in the post-COVID-19 era, using selected universities in Kwara State, Nigeria, as a case study. The study specifically investigates perceived usefulness, perceived ease of use, and overall attitude while also exploring gender differences across

these variables. The findings will provide insights for educational policymakers, administrators, and instructors on how to enhance the design, implementation, and support systems of online learning platforms for improved academic engagement and equity in digital learning environments.

The COVID-19 pandemic not only disrupted traditional classroom instruction but also accelerated the digital transformation of education systems worldwide. Institutions that had previously hesitated to implement online learning platforms were compelled to adopt them rapidly, often with little time for adequate planning, training, or infrastructure development. This sudden shift exposed both students and educators to unfamiliar pedagogical models and technological tools. While some adapted quickly, others struggled due to limited digital competence, unreliable connectivity, or lack of institutional support.

In Nigeria, many higher education institutions faced challenges in deploying effective online learning systems due to structural limitations. These include inconsistent electricity supply, high costs of internet data, lack of learning devices, and digital illiteracy among both students and academic staff. Despite these barriers, online learning has emerged as a promising alternative, especially in the post-pandemic context where blended and hybrid learning models are increasingly considered the new normal. However, the extent to which students perceive and are willing to engage with these platforms varies widely and is shaped by multiple socio-demographic and institutional factors.

To successfully integrate online learning platforms into the academic structure, it is essential to investigate users' acceptance. Acceptance is often determined by an individual's belief that the technology will help achieve learning objectives efficiently (perceived usefulness) and that it will be easy to use without requiring excessive effort (perceived ease of use). When these two factors are favourable, students are more likely to develop a positive attitude, which in turn leads to actual use and engagement. The Technology Acceptance Model (TAM), therefore, provides a robust framework for understanding and predicting student behaviour in digital learning environments.

Numerous studies have validated the TAM in various contexts, including higher education. For instance, research by Johari et al. found that students' perception of the usefulness of a learning management system was a key predictor of their intention to use it for coursework. Similarly, Widianto & Indyastuti (2020) showed a significant positive correlation between perceived ease of use and positive attitude toward technology. These findings underscore the importance of designing user-friendly platforms and offering training to increase confidence and competence among students.

However, other studies caution that positive perceptions do not always translate to regular or effective usage. For example, Lazim *et al.* (2021) found that although students had favourable views of online learning, many still preferred traditional classroom settings due to concerns about isolation, limited interaction, and motivation. These findings suggest that the success of online learning also depends on emotional and contextual factors such as students' learning preferences, prior experience, and the quality of instructional design.

Gender differences have also been a focal point in discussions about digital education. Research has shown that male and female students may respond differently to technology based on factors such as confidence, familiarity, and perceived relevance. According to Sieverding and Koch (2009), men are often more task-focused and more likely to adopt a technology if they perceive it as useful for academic success. Women, on the other hand, are more likely to be influenced by how easy a platform is to navigate and whether it aligns with their self-efficacy. However, this trend is not universal. Mariscal *et al*. (2019) notes that the

widespread use of smartphones and mobile learning tools is helping to bridge the gender gap in digital education, particularly in developing countries.

The emergence of mobile-friendly and intuitive platforms such as Google Classroom, Moodle, Canvas, and proprietary university systems has further enhanced the adoption of online learning. These platforms often include features such as discussion forums, file sharing, quizzes, assignment submissions, video conferencing, and real-time feedback, all of which facilitate active learning. Furthermore, platforms integrated with social media tools can enhance collaboration, peer engagement, and a sense of community among learners.

Another factor that influences students' attitudes is the quality of interaction in an online learning environment. Students often report that the absence of physical presence reduces opportunities for spontaneous discussion, non-verbal cues, and emotional connection. Instructors must, therefore, employ strategies that foster interactivity, such as synchronous sessions, group work, and timely feedback. Institutions must also provide orientation programs and technical support to minimize frustration and disengagement, particularly among first-time users.

In the Nigerian context, these considerations are especially important. The pandemic highlighted deep-seated inequalities in access to digital learning, particularly between students in urban and rural areas and those in public versus private institutions. While some universities were able to quickly deploy functional learning management systems and provide data subsidies, others struggled to maintain academic continuity. This uneven adoption has implications for educational equity and student outcomes. Therefore, it becomes necessary to conduct empirical research that examines how students in different types of universities perceive and respond to online learning platforms.

Moreover, institutional ownership—whether federal, state, or private—may also influence access to technology, training opportunities, and administrative support. Private universities often have better funding models, enabling them to invest in modern learning infrastructure and offer a more personalized learning experience. Conversely, state-owned institutions may lack the financial and technical resources to sustain robust digital platforms. Understanding how these institutional differences shape student perceptions and attitudes can inform policy and resource allocation.

Based on the existing literature and contextual realities, this study is guided by the following objectives:

(i) To examine undergraduates' perceived usefulness of online learning platforms in selected universities in Kwara State.
(ii) To assess undergraduates' perceived ease of use of these platforms.
(iii) To explore the attitudes of undergraduates toward using online learning platforms.
(iv) To determine whether there are gender-based differences in perceived usefulness.
(v) To evaluate whether gender influences perceived ease of use.
(vi) To investigate whether gender differences exist in overall attitudes toward online learning.

This study contributes to the broader discourse on digital learning by offering empirical insights into how Nigerian undergraduates perceive and engage with online learning platforms in the aftermath of COVID-19. The findings will help educational institutions and policymakers to tailor digital strategies that align with students' needs, preferences, and capabilities. Furthermore, the research underscores the importance of inclusive and evidence-based approaches in designing and implementing technology-driven learning environments.

The following research questions will be answered:

(i) What is undergraduates' perceived usefulness of online learning platform?
(ii) What is undergraduates' perceived ease of use of online learning platform?
(iii) What is the attitude of undergraduate students towards the use of online learning platforms?

The following research hypotheses were tested.

(i) HO1: There is no significant difference between male and female undergraduates' perceived usefulness of online learning platforms.
(ii) HO2: There is no significant difference between male and female undergraduates' perceived ease of use of online learning platforms.
(iii) HO3: There is no significant difference between male and female undergraduate attitudes towards the use of online learning platforms.

2. METHODS

This study adopted a descriptive survey research design to investigate the perception and attitude of undergraduate students toward the use of online learning platforms (OLP) in the post-COVID-19 era in Kwara State, Nigeria. The design was deemed appropriate as it enabled the researchers to collect, analyse, and interpret data from a large number of respondents without manipulating any variables.

The population for the study consisted of all undergraduate students enrolled in universities within Kwara State. These institutions included federal, state, and private universities. A purposive sampling technique was used to select the universities based on ownership category—federal, state, and private. Thereafter, a simple random sampling technique was employed to select a total of 383 students from a population of 78,082 undergraduates across the selected universities.

Data was gathered using a researcher-designed structured questionnaire, which comprised four sections:

(i) Section A: Demographic information of respondents
(ii) Section B: Perceived usefulness of the online learning platform
(iii) Section C: Perceived ease of use of the online learning platform
(iv) Section D: Attitude toward the use of the online learning platform

All items in Sections B, C, and D were rated using a 4-point Likert scale ranging from Strongly Disagree (1) to Strongly Agree (4).

To ensure the validity of the instrument, it was reviewed by experts in educational technology and measurement and evaluation. For reliability, the instrument was pilot-tested on 30 undergraduates from LAUTECH, a university outside the study area. The reliability coefficients obtained using Cronbach's Alpha were:

(i) 0.76 for perceived usefulness
(ii) 0.70 for perceived ease of use
(iii) 0.82 for attitude toward online learning

These values confirmed that the instrument was reliable and internally consistent.

Data collected were analysed using descriptive and inferential statistics. Frequency counts, percentages, means, and standard deviations were used to answer the research questions. Independent sample t-tests were employed to test the hypotheses at a 0.05 level of significance.

This methodological approach was guided by the Technology Acceptance Model (TAM), which emphasizes perceived usefulness and perceived ease of use as predictors of users' attitudes and behavioural intentions regarding technology adoption.

3. RESULTS AND DISCUSSION

Table 1 shows the institution ownership of the respondents sampled. 27 out of the total respondents are from Private institutions, which represents a total of 7.5%. 117 (32.2%) of the respondents are students in state institutions. 219 (60.3%) of the respondents are in federal institutions. Therefore, the total number of respondents is 363 (100%).

Table 1. Distribution of the respondents sampled based on institution ownership.

Institution Ownership	Frequency	%
1. Private	27	7.5%
2. State	117	32.2%
3. Federal	219	60.3%
Total	**363**	**100.0%**

Table 2 shows the gender of the respondents. 179 out of the total respondents are female, representing 49.3%, while 184 (50.7%) of the respondents are male. Therefore, the total number of respondents is 363 (100%).

Table 2. Distribution of the respondents sampled based on gender.

Gender	Frequency	%
1. Female	179	49.3%
2. Male	184	50.7%
Total	**363**	**100.0%**

3.1. Research Question 1: What is Undergraduates' Perceived Usefulness of Online Learning Platform?

Table 3 shows the undergraduates' perceived usefulness of online learning platform. To examine undergraduates' perceived usefulness of online learning platforms as stated in research question 1, and as shown in Table 3 above. The mean score for each of the question items is listed in the last column of the table. The average mean score for each of the items is 2.50. The average mean score of 2.50 was calculated by adding up each value of the 4-point Likert scale and dividing by 4 (Strongly Agree 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1. 4+3+2+1=10 divided by 4 = 2.50. Item 1 has the highest mean score of 3.31, which is greater than the average mean score (2.50), and item 6 has the lowest mean score of 2.51, which is also greater than the average mean score (2.50). The grand mean of the entire item is 2.97, which is greater than the 2.50 average mean score. This implies that undergraduates' perceived usefulness of online learning platforms is positive.

Table 3. Undergraduates' perceived usefulness of online learning platform.

Items	SD	D	A	SA	Mean
1. I feel my learning experiences will be beneficial to my studies using an online learning platform	8 (2.2%)	33 (9.1%)	150 (41.3%)	172 (47.4)	3.31
2. I am comfortable with written communication (for example, via the chat box in an online learning platform).	2 (0.5%)	33 (9.1%)	234 (64.5%)	94 (25.9%)	3.15
3. I believe looking back on what I have learned in a course through an online learning platform will help me to remember it better	2 (0.5%)	49 (13.5%)	180 (49.6%)	132 (36.4%)	3.22

Table 3 (continue). Undergraduates' perceived usefulness of online learning platform.

	Items	SD	D	A	SA	Mean
4.	I can work in a group during online activities through an online learning platform.	9 (2.5%)	81 (22.3%)	160 (44.1%)	113 (31.1%)	3.04
5.	I can collaborate with other students during online activities through an online learning platform	31 (8.5%)	31 (8.5%)	133 (36.6%)	168 (46.4%)	3.18
6.	Learning is the same in class and at home on the online learning platform.	66 (18.2%)	100 (27.5%)	145 (40%)	52 (14.3%)	2.51
7.	I believe that learning on an online learning platform is more motivating than a regular course.	29 (7.9%)	152 (41.9%)	102 (28.2%)	80 (22%)	2.64
8.	I believe a complete course can be given by the online learning platform without difficulty.	11 (3%)	110 (30.3%)	160 (44.1%)	82 22.6(%)	2.86
9.	I could pass a course on the online learning platform without any teacher assistance	53 (14.6%)	86 (23.7%)	162 (44.6%)	62 (17.1%)	2.63
10.	Online learning platform promotes the sharing of ideas and reusing study contents	12 (3.3%)	135 (37.2%)	142 (39.1%)	74 (20.4%)	2.75
11.	Online learning platforms can be used to organize documents and resources from individuals and groups of students	10 (2.8%)	71 (19.6%)	178 (49%)	104 (28.6%)	3.03
12.	Online learning platform for students and teachers to link to the relevant resources and share information and content with others	10 (2.8%)	29 (8%)	222 (61.2%)	102 (28%)	3.12
13.	Online learning platform enhances collaboration among students in solving well-designed and meaningful educational problems	10 (2.8%)	30 (8.3%)	221 (60.9%)	102 (28%)	3.13
14.	Online learning platform makes students accountable for the learning process even outside the classrooms	13 (3.6%)	65 (18%)	193 (53.1%)	92 (25.3%)	2.99
15.	Online learning makes students accountable for the learning process even outside the classrooms	20 (5.5%)	57 (15.7%)	175 (48.2%)	111 (30.6%)	3.03
Grand mean						**2.97**

3.2. Research Question 2: What is Undergraduates' Perceived Ease of Use of Online Learning Platforms?

Table 4 presents the undergraduates' perceived ease of use of online learning platform. To find out the undergraduates' perceived ease of use of online learning platform as stated in research question 2, and as shown in Table 4 above. The mean score for each of the question items is listed in the last column of the table. The average mean score for each of the items is 2.50. The average mean score of 2.50 was calculated by adding up each value of the 4-point Likert scale and dividing by 4 (Strongly Agree 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1. 4+3+2+1=10 divided by 4 = 2.50. Item 10 has the highest mean score of 3.24, which is greater than the average mean score (2.50), and item 14 has the lowest mean score of 2.87, which is also greater than the average mean score (2.50). The grand mean of the entire item is 3.03, which is greater than the 2.50 average mean score. Therefore, it can be established that undergraduates' perceived ease of use of online learning platforms is positive.

Table 4. Undergraduates' perceived ease of use of online learning platform.

	Items	SD	D	A	SA	Mean
1.	I can easily access the online learning platform as needed for my studies	5 2.1%	44 12.5%	170 46.0%	144 39.4%	3.22
2.	I am comfortable communicating with my lecturer and other classmates electronically.	10 3.5%	55 15.4%	214 58.0%	84 23.1%	3.00

Table 4 (continue). Undergraduates' perceived ease of use of online learning platform.

Items	SD	D	A	SA	Mean
3. I am willing to actively communicate with my lecturer and other classmates electronically.	10 3.5%	54 15.2%	189 51.4%	110 30.1%	3.09
4. In my studies, I am self-disciplined and find it easy to set aside reading and homework time through an online learning platform	10 3.2%	70 19.4%	157 42.6%	126 34.8%	3.31
5. I can manage my study time effectively and easily complete assignments on time using an online learning platform	11 3.7%	51 14.4%	223 60.4%	78 21.5%	2.99
6. As a student, I enjoy working independently through an online learning platform.	8 2.9%	89 24.5%	178 48.4%	88 24.2%	2.94
7. As a student, I enjoy working with other students in groups through an online learning platform.	11 3.7%	88 24.2%	177 47.9%	87 23.9%	2.92
8. I like a lot of interaction with my lecturer/instructors through an online learning platform	12 4.0%	112 30.6%	149 40.7%	90 24.7%	2.86
9. I feel comfortable composing text on a computer/laptop/smartphone in an online learning environment.	17 5.6%	64 17.8%	147 39.9%	135 36.7%	3.14
10. I feel comfortable communicating online in English through an online learning platform.	7 2.7%	40 11.4%	164 44.7%	152 41.2%	3.24
11. I can ask my lecturer questions and receive a quick response during online learning activities outside of class through an online learning platform.	11 3.7%	92 25.5%	170 46.0%	90 24.7%	2.92
12. I am motivated by the material in an online activity outside of class through an online learning platform.	9 3.2%	57 16.0%	198 53.7%	99 27.1%	3.06
13. I can discuss with other students during online activities through an online learning platform.	10 3.5%	59 16.5%	201 54.5%	93 25.5%	3.01
14. I always have internet access to use online learning platform	25 7.4%	106 29.0%	124 34.0%	108 29.5%	2.87
15. I can use online learning platforms without the instructions of my lecturers	21 6.4%	73 20.2%	173 47.1%	96 26.3%	2.92
Grand mean					**3.03**

3.3. Research Question 3: What is The Attitude of Undergraduate Students towards The Use of Online Learning Platforms?

Table 5 shows the attitude of undergraduate students toward the use of online learning platform. To determine the attitude of undergraduate students towards the use of online learning platforms as stated in research question 3, and as shown in Table 5. The mean score for each of the question items is listed in the last column of the table. The average mean score for each of the items is 2.50. The average mean score of 2.50 was calculated by adding up each value of the 4-point Likert scale and dividing by 4 (Strongly Agree 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1. 4+3+2+1=10 divided by 4 = 2.50. Item 3 has the highest mean score of 3.31, which is greater than the average mean score (2.50), and item 9 has the lowest mean score of 2.48, which is less than the average mean score (2.50). The grand mean of the entire item is 3.00, which is greater than the 2.50 average mean score. This implies that the attitude of undergraduate students towards the use of online learning platforms is positive.

Table 5. Attitude of undergraduate students towards the use of online learning platforms.

Items	SD	D	A	SA	Mean
1. I have some level of concern about written exams and online exams during COVID-19.	17 5.3%	75 20.7%	153 41.8%	118 32.2%	3.01
2. I find it easy to understand teachers online.	25 7.4%	113 30.9%	176 47.9%	49 13.8%	2.69
3. I know online learning will be very useful to me during this COVID-19 period.	4 1.9%	26 7.7%	178 48.4%	155 42.0%	3.31
4. The online learning platform will lead to a considerable reduction in my financial expenses over the face-to-face method.	37 10.6%	47 13.3%	156 42.6%	123 33.5%	2.97
5. I find it easy and convenient to download course materials needed for my assignments and study online.	2 1.3%	35 10.1%	166 45.2%	160 43.4%	3.30
6. There has been significant academic improvement in my study through e-learning during the COVID-19 period.	5 2.1%	78 21.5%	195 52.9%	85 23.4%	2.99
7. I feel online learning platforms will help me improve my digital creativity.	3 1.6%	31 9.0%	181 49.2%	148 40.2%	3.27
8. With ICTs, online learning platforms will provide lots of flexibility over face-to-face methods.	6 2.4%	83 22.9%	157 42.8%	117 31.9%	3.03
9. I prefer online learning platforms to face-to-face.	81 22.3%	101 27.7%	105 29.0%	79 21.0%	2.48
10. The online learning platform allows me to personalize learning, and this enables me to learn faster and better.	10 3.5%	102 27.9%	168 45.7%	83 22.9%	2.88
11. Online learning platform systems can remediate the present lockdown challenge of teaching.	16 5.1%	56 15.7%	179 48.7%	112 30.6%	3.04
12. Online learning platforms provide me with a wide range of materials, which saves me the cost of buying hard-copy materials.	8 2.9%	34 9.8%	164 44.7%	157 42.6%	3.26
13. I lacked access to an online learning platform due to an unstable power supply.	30 8.8%	66 18.4%	124 33.8%	143 39.1%	3.05
14. I engaged in technology-based courses using e-resources more than others.	13 4.3%	68 18.9%	192 52.1%	90 24.7%	2.96
15. I encountered difficulties in online learning platforms due to my inadequate ICT skills.	31 9.0%	88 24.2%	146 39.9%	98 26.9%	2.83
Grand mean					**3.00**

3.4. HO1: There is No Significant Difference between Male and Female Undergraduates Perceived Usefulness of Online Learning Platforms

From **Table 6**, it can be deduced that there was a significant difference between male and female undergraduates' perceived usefulness of online learning platforms. This is reflected in the result: $t(361) = -2.401$, $p < 0.05$. That is, the result of the t-value of -2.401 resulted in to 0.017 significance value, which is less than the 0.05 alpha value. Thus, the null hypothesis is rejected. This implies that there was a significant difference between male and female undergraduates' perceived usefulness of online learning platforms.

Table 6. Independent sampled t-test showing significant difference between male and female undergraduates' perceived usefulness of online learning platform.

	Gender	N	X	SD	df	t	Sig. (2-tailed)	Decision
1.	Male	184	45.5543	6.97672				
					361	-2.401	0.017	Rejected
2.	Female	179	43.7430	7.39654				

3.5. HO2: There is No Significant Difference between Male and Female Undergraduates' Perceived Ease of Use of Online Learning

From **Table 7**, there was no significant difference between male and female undergraduates' perceived ease of use of online learning platforms. This is reflected in the result: t (361) = -1.504, p > 0.05. That is, the result of the t-value of -1.504 resulted in to 0.134 significance value, which is greater than the 0.05 alpha value. Thus, the null hypothesis is accepted. This implies that there was no significant difference between male and female undergraduates' perceived ease of use of online learning.

Table 7. Independent sampled t-test showing significant difference between male and female undergraduates perceived ease of use of online learning platform.

	Gender	N	X	SD	df	t	Sig. (2-tailed)	Decision
1.	Male	184	46.0820	6.56069				
					361	-1.504	0.134	Not Rejected
2.	Female	179	44.8883	8.44405				

3.6. HO3: There is No Significant Difference between Male and Female Undergraduates' Attitudes toward the Use of Online Learning

From **Table 8**, there was a significant difference between male and female undergraduate attitudes towards online learning. This is reflected in the result: t (361) = -1.875, p < 0.05. That is, the result of the t-value of -1.875 resulted in to 0.062 significance value, which is less than the 0.05 alpha value. Thus, the null hypothesis is rejected. This implies that there was a significant difference between male and female undergraduate attitudes towards the use of online learning platforms.

Table 8. Independent sampled t-test showing significant difference between male and female undergraduates' attitudes toward the use of online learning platform.

	Gender	N	X	SD	df	T	Sig. (2-tailed)	Decision
1.	Male	184	45.7772	5.88128				
					361	-1.875	0.062	Rejected
2.	Female	179	44.5084	6.97940				

3.7. Discussion

The findings of this study revealed that undergraduate students in Kwara State perceived the usefulness of online learning platforms positively. This perception likely stems from their experience during the COVID-19 pandemic, where OLPs enabled continued academic engagement despite physical school closures. Students believe OLPs help improve learning outcomes because they offer flexibility, access to study materials, and opportunities for

collaboration, which align with prior research that found students' intentions to use online learning were influenced by perceived usefulness (Johari *et al*., 2015).

The study also found that the perceived ease of use of online learning platforms was high among undergraduates. This can be attributed to increasing familiarity with digital technologies, the growth in smartphone penetration, and improvements in ICT infrastructure. Students found it relatively easy to navigate OLPs, interact with lecturers and peers, and manage study tasks independently because these platforms are often user-friendly and support multiple communication formats. This supports the findings that a positive correlation exists between ease of use and attitude toward OLPs (Widianto & Indyastuti., 2020).

Furthermore, the attitudes of students toward OLPs were generally positive. This may be because online learning platforms offer convenience, allow personalized learning, and reduce the cost of traditional learning. The flexibility to learn at one's pace and the ability to revisit content were motivating factors. Positive attitudes also emerged because many students experienced academic improvement and enhanced digital skills. These results corroborate earlier studies that found that students favor online learning because of its accessibility and ability to support continuous education beyond the classroom (Varela *et al*., 2012).

In terms of gender differences, the study revealed that male students had significantly higher perceived usefulness of OLPs compared to female students. This may be because male students are often more inclined toward experimenting with technology, which enhances their confidence in using such tools for academic purposes. This supports earlier findings that gender can influence how technology is perceived and used in learning environments (Enyoojo *et al*., 2024).

However, when examining perceived ease of use, there was no significant difference between male and female undergraduates. This suggests that both genders are equally capable of using online platforms effectively, possibly because most students, regardless of gender, have been exposed to similar ICT tools throughout their education. This finding is consistent with research showing that while men may be more task-focused, women's ease of use is driven by self-efficacy and is not significantly different when both are trained adequately (Sieverding & Koch, 2009).

Lastly, a significant difference was found in the attitudes of male and female students toward OLPs. Female students exhibited slightly more positive attitudes, possibly because of their greater focus on communication, collaboration, and interactive learning features offered by online platforms. They may be more attuned to the social and collaborative aspects of e-learning, which contributes to a more favourable outlook. This supports studies highlighting gender gaps in ICT use, with females more likely to embrace technologies that enhance interpersonal connections and flexible learning (Orser *et al*., 2019).

Overall, these findings underscore that students' positive perception, ease of use, and attitudes toward online learning platforms are influenced by their exposure, digital experience, and the supportive features of OLPs. Because of this, institutions need to consider these factors when developing and implementing online learning environments to maximize engagement and academic success.

4. CONCLUSION

This study investigated the perception and attitude of undergraduate students toward online learning platforms (OLPs) in the post-COVID-19 era across universities in Kwara State, Nigeria. The findings reveal that students generally have a positive perception of the usefulness of OLPs, indicating their belief in the platforms' ability to support academic

progress and improve learning experiences. Students also perceived OLPs as easy to use, highlighting their comfort with navigating digital learning environments, communicating with peers and lecturers, and managing study tasks independently.

Furthermore, the overall attitude of undergraduates toward the use of OLPs was favourable, showing a strong willingness to engage with online tools for learning. The study also discovered gender-based differences: male students reported higher perceived usefulness, while no significant difference was found in perceived ease of use. Interestingly, female students demonstrated a more positive attitude toward OLPs, reflecting their responsiveness to the interactive and flexible features of online education.

In conclusion, OLPs have become a crucial part of the educational landscape and have proven effective in enhancing learning continuity and accessibility beyond the constraints of the traditional classroom. The success of OLP integration depends on institutional support, infrastructure development, and training to ensure all students benefit equally, regardless of gender or background.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

6. REFERENCES

Adenubi, O. A., Samuel, N., and Oyenuga, A. O. (2025). A framework for education technology integration in Nigerian basic school system: Digital framework for technology integration in education (diftie) for basic school system. *University of Ibadan Journal of Science and Logics in ICT Research*, *13*(1), 188-199.

Almufarreh, A., and Arshad, M. (2023). Promising emerging technologies for teaching and learning: Recent developments and future challenges. *Sustainability*, *15*(8), 6917.

Amruta, H., Sushil, N., and Poonam, R. (2016). Higher education in India: Present status and path ahead. *International Journal in Management and Social Science*, *4*(6), 441-456.

Enyoojo, S. F., Ijah, C. E., Etukudo, E. M., Usman, I. M., Ezeonuogu, C. S., Adaramati, T., and Aigbogun, E. (2024). Satisfaction and learning experience of students using online learning platforms for medical education. *BMC Medical Education*, *24*(1), 1398.

Ibironke, E. S., Ogunlade, O. O., Oladosu, K. K., and Afolayan, B. F. (2018). Experts' rating and students' reaction of interactive multimedia instructional package on selected educational technology concepts in Kwara State*. International Journal for Innovative Technology Integration in Education*, *2*(2), 1-10.

Johari, N., Mustaffha, N., Ripain, N., Zulkifli, A., and Ahmad, N. W. (2015). Students' acceptance of online learning in KUIS. *First International Conference on Economics and Banking*, *15*(1), 326-335.

Lazim, C. S. L. M., Ismail, N. D. B., and Tazilah, M. D. A. K. (2021). Application of technology acceptance model (TAM) towards online learning during covid-19 pandemic: Accounting students perspective. *International Journal of Business, Economics and Law*, *24*(1), 13-20.

Mariscal, J., Mayne, G., Aneja, U., and Sorgner, A. (2019). Bridging the gender digital gap. *Economics*, *13*(1), 20190009.

Marjan, L. L. U., Kusumantara, P. M., and Mukaromah, S. (2018). Analisis hubungan antar variabel technology acceptance model (tam) pada e-learning UPN "Veteran" Jawa Timur dengan pendekatan uji signifikansi. *Jurnal Sistem Informasi Dan Bisnis Cerdas*, *11*(2), 13-24.

Mbato, S. I., and Eguzozie, N. G. (2024). Technical and vocational education at basic and post basic levels of education: implications for poverty eradication and youth unemployment in Nigeria. *Journal of Education in Developing Areas*, *31*(5), 36-46.

Olafare, F. O., Adeyanju, L. O., and Fakorede, S. O. (2018). Colleges of education lecturers attitude towards the use of information and communication technology in Nigeria. *Malaysian Online Journal of Educational Sciences*, *5*(4), 1–12.

Orser, B., Riding, A., and Li, Y. (2019). Technology adoption and gender-inclusive entrepreneurship education and training. *International Journal of Gender and Entrepreneurship*, *11*(3), 273-298.

Rosenthal, R. L. (2008). Older computer-literate women: Their motivations, obstacles, and paths to success. *Educational Gerontology*, *34*(7), 610-626.

Saravanakumar, A., Raja, G., and Sivakumar, P. (2023). Transforming education: Perceptions and challenges of technology-enabled teacher education programmes. *Open Access Research Journal of Engineering and Technology*, *5*(2), 001-007.

Sieverding, M., and Koch, S. C. (2009). Evaluating of computers competence: How gender matters. *Computers and Education*, *52*(3), 696 - 701.

Varela, O. E., Cater III, J. J., and Michel, N. (2012). Online learning in management education: An empirical study of the role of personality traits. *Journal of Computing in Higher Education*, *24*(3), 209-225.

Wang, Y. S., Wu, M. C., and Wang, H. Y. (2009). Investigating the determinants and age and gender differences in the acceptance of mobile learning. *British Journal of Educational Technology*, *40*(1), 92-118.

Widianto, Y. F., and Indyastuti, D. L. (2020). Technology acceptance model on Gojek applications in Purwokerto. *Jurnal Akuntansi, Manajemen Dan Ekonomi*, *22*(1), 12-20.