



## Undergraduate Perception, Attitude, and Utilization of Artificial Intelligence (AI) ChatGPT for Learning: An Educational Technology Perspective

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### ABSTRACT

This study investigated the perception, attitude, and utilization of ChatGPT, a conversational artificial intelligence (AI) tool, among undergraduate students. As AI becomes increasingly prominent in educational settings, understanding how students interact with such tools is essential for policy formulation and academic integrity. The study adopted a descriptive survey design and drew data from 120 respondents selected through purposive and random sampling across federal, state, and private universities. Results revealed that students generally hold favorable perceptions and positive attitudes toward ChatGPT, using it primarily for simplifying learning processes, gaining conceptual clarity, and completing assignments. However, gender and institutional ownership significantly influenced perception and attitude. Male students exhibited a stronger perception of ChatGPT's academic utility, while females demonstrated a more positive attitude toward its use. Moreover, students from federal universities reported higher usage rates than those in state or private institutions. These findings highlighted the importance of equitable access to AI tools, ethical usage training, and integration strategies tailored to different educational contexts. The study recommends AI literacy programs, clear institutional guidelines, and proactive strategies to promote responsible and effective AI use in Nigerian higher education.

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## 1. INTRODUCTION

Education has long been recognized as a pivotal force in shaping individuals and communities, serving as a catalyst for personal development, social cohesion, and national advancement. In the 21st century, the digital revolution has significantly transformed how knowledge is accessed, shared, and applied, especially within higher education institutions. With increasing emphasis on student-centered learning and technological integration, artificial intelligence (AI) tools like ChatGPT have emerged as innovative solutions that support academic engagement and personalized instruction.

In the context of university education, the integration of Information and Communication Technology (ICT) has redefined traditional pedagogical methods. ICT provides students with on-demand access to a vast array of learning resources, interactive platforms, and collaborative tools that foster more efficient knowledge acquisition. Devices and applications such as computers, smartphones, e-learning platforms, and now AI-powered systems like ChatGPT are essential components of modern learning environments. These technologies not only enhance teaching and learning experiences but also support students in managing information overload, developing critical thinking skills, and engaging in meaningful academic discourse.

ChatGPT, developed by OpenAI, represents a remarkable leap in natural language processing and generative AI capabilities. As a conversational AI model, it is capable of generating human-like responses, facilitating real-time interactions, and assisting users with a variety of tasks, from composing essays to understanding complex concepts. The introduction of ChatGPT into the academic sphere opens up opportunities for self-directed learning, peer-like support, and improved access to academic content, regardless of time or location (Aithal & Aithal, 2023). Because ChatGPT can simulate meaningful dialogue, summarize readings, and suggest relevant references, students can utilize it as a supplementary academic tool that complements traditional instruction methods.

Despite these advantages, there are growing concerns about over-reliance on AI, ethical implications, and the risk of diminished human agency in education. Critics argue that while AI tools may promote ease and efficiency, they may also contribute to reduced critical thinking, increased plagiarism, and weakened academic integrity. For example, if students become dependent on ChatGPT for idea generation and problem-solving, their ability to think independently and develop original thoughts may decline. Moreover, AI-generated content can sometimes be inaccurate or biased, especially when used uncritically, which raises concerns about reliability and accountability.

In Nigeria, the rapid expansion of digital tools in education has led to varying degrees of adoption across universities. Federal, state, and private institutions differ in terms of infrastructure, access to technology, and policy frameworks. Students attending private universities may enjoy better exposure to AI technologies due to smaller class sizes, better funding, and proactive management policies. In contrast, state and federal universities, often dealing with larger student populations and limited budgets, may experience slower adoption rates and inconsistent implementation of digital tools (Al-Khalid & Ahmed, 2023; Smith & Jones, 2022).

Gender disparities also shape the dynamics of ChatGPT usage. While male students often show higher confidence in navigating new technologies, female students tend to approach AI tools with more caution and reflection. This difference manifests in varied usage patterns, with males often engaging in longer usage sessions and females exhibiting higher frequencies of use accompanied by greater concerns about privacy, ethical implications, and

overdependence (Bouzar *et al.*, 2024). Because these gendered experiences influence how students perceive and adopt AI tools, understanding their attitudes is essential for designing inclusive and effective integration strategies.

The Technology Acceptance Model (TAM), originally derived from the Theory of Reasoned Action, provides a useful theoretical framework for analyzing students' interactions with ChatGPT. According to TAM, two key factors—perceived usefulness and perceived ease of use—strongly influence whether users accept and adopt new technologies. Students who believe that ChatGPT enhances their academic performance and is easy to use are more likely to integrate it into their study routines. These beliefs, shaped by past experiences, peer influence, and institutional support, determine whether ChatGPT is seen as an enabler or a distraction in the learning process (Marjan *et al.*, 2018; Islami *et al.*, 2021).

Perception is a crucial determinant in technology adoption. It encompasses how students interpret their experiences, evaluate the benefits and drawbacks, and develop preferences. A positive perception of ChatGPT typically includes beliefs that it saves time, simplifies learning, and improves comprehension. On the other hand, a negative perception may involve skepticism about the quality of AI-generated responses or concerns over ethical misuse. For example, some students view ChatGPT as a virtual tutor, while others worry that it fosters academic laziness or facilitates cheating (Antonius *et al.*, 2020).

Attitude, defined as the degree of favor or disfavor toward a particular object or behavior, also plays a significant role in AI adoption. Students with a positive attitude toward ChatGPT often express excitement, curiosity, and motivation to explore its features. They tend to appreciate its potential to simplify assignments and offer alternative explanations. In contrast, students with negative attitudes may resist its usage due to concerns about its impact on academic integrity, data privacy, or the authenticity of learning. Because attitudes are shaped by social norms, personal beliefs, and prior exposure, institutions must foster positive experiences to increase AI acceptance (Che *et al.*, 2021).

Usage behavior, or how frequently and in what ways students use ChatGPT, is another critical factor. Utilisation reflects not only access and technical literacy but also trust in the system's reliability and relevance. Students may use ChatGPT for summarizing articles, completing assignments, preparing for exams, or simply exploring topics of interest. The extent and quality of usage can vary depending on institutional support, availability of digital infrastructure, and the presence of clear guidelines on ethical and effective use (Crawford & Kirby, 2008).

Given the novelty of ChatGPT and the limited research on its educational applications in Nigeria, especially in North Central states like Kwara, it is crucial to investigate how undergraduates perceive, interact with, and benefit from this AI tool. Understanding these dynamics not only sheds light on the current state of technology integration in Nigerian universities but also provides actionable insights for policymakers, educators, and developers aiming to enhance digital literacy and equitable access.

Thus, this study seeks to assess undergraduate perception, attitude, and usage of ChatGPT for learning in universities across Kwara State, Nigeria. Because AI continues to reshape educational practices, it is important to ensure that its adoption is ethical, inclusive, and conducive to long-term academic growth.

Another dimension that requires exploration is the institutional influence on the integration and usage of AI tools. Public universities in Nigeria often face infrastructural limitations, staff shortages, and larger student populations, which can hinder the smooth adoption of digital tools like ChatGPT. Conversely, private universities tend to offer better access to technology, student support systems, and flexible academic policies that encourage

innovation. Because these disparities influence student experiences, comparing usage and attitudes across institutions provides a comprehensive view of how institutional resources affect technology adoption in education (Al-Khalid & Ahmed, 2023).

Moreover, ethical concerns surrounding ChatGPT's use in academia cannot be ignored. Although it enables faster access to information, there is apprehension that students may misuse the tool for plagiarism, bypassing critical thinking and original content creation. This misuse can undermine academic integrity and weaken the learning process. Therefore, universities must create clear guidelines and digital literacy training to ensure that students understand both the possibilities and the limitations of AI-generated content (Naweed-E-Sehar, 2024). Because students may not be fully aware of the implications of using such tools unsupervised, proper orientation is necessary to maintain ethical standards and meaningful academic outcomes.

Furthermore, the psychological factors influencing students' engagement with ChatGPT warrant investigation. Elements such as motivation, confidence, curiosity, and anxiety all play a role in how students perceive and use new technologies. For example, students with higher confidence in their digital skills may be more open to experimenting with AI, while those with limited exposure or anxiety toward technology may exhibit resistance. Additionally, the role of peer influence is notable, as students often adopt tools that are popular among their classmates or recommended by instructors (Israel, 2013; Antonius *et al.*, 2020). Because these factors are interwoven, they must be considered when assessing student engagement with AI.

In examining student utilization, it is equally important to understand how students use ChatGPT in their academic routines. Some may rely on it to clarify difficult topics, others to generate outlines or ideas for assignments. While some use it merely as a search engine alternative, others treat it as a study companion or tutor. These different usage patterns reflect varying levels of dependence, technological maturity, and academic needs. Because ChatGPT can act as both a learning aid and a shortcut, differentiating between productive and detrimental usage is crucial for educators and administrators aiming to promote balanced learning environments (Kocyigit & Zhaksylyk, 2023; Le & Van Tran, 2024).

Another emerging issue is privacy and data security, particularly regarding how much information students are comfortable sharing with AI platforms. Given that ChatGPT operates through cloud servers and is managed by private companies, concerns arise about the protection of personal data, academic queries, and intellectual contributions. Students need reassurance that their interactions with AI tools are safe, confidential, and compliant with data protection laws. Because mistrust in data handling can limit usage or lead to apprehensive behavior, universities must also address these concerns as part of their AI integration strategy (Bouzar *et al.*, 2024).

Lastly, the global trend toward AI integration in education necessitates that Nigerian universities adapt rapidly. With international institutions already incorporating AI tools into classrooms, research, and administrative systems, local universities risk lagging if they fail to evolve. Encouraging responsible use of ChatGPT, training educators, and equipping institutions with the right infrastructure can help bridge the digital divide and enhance academic competitiveness. Because global academic landscapes are becoming increasingly technology-driven, proactive measures must be taken to ensure Nigerian students are not left behind (Aithal & Aithal, 2023; Acosta-Enriquez *et al.*, 2024).

Therefore, the current study investigates the perception, attitude, and utilization of ChatGPT among undergraduate students in Kwara State. It also examines gender and institutional ownership (federal, state, and private) as variables that may influence these

factors. Because little is known about how undergraduates engage with AI in Nigeria's unique educational context, this research fills a crucial knowledge gap and provides actionable insights for academic policy and planning.

The emergence of Information Communication Technology (ICT) is in every facet of life, including the educational sector, which brought about innovative teaching (ChatGPT), thereby shifting the teaching pedagogy from teacher to learner-centered. The integration of artificial intelligence (AI) into education has seen a significant surge in recent years, with ChatGPT emerging as a prominent tool for learning. One such AI technology that has gained prominence is ChatGPT, a conversational AI model developed by OpenAI. ChatGPT offers potential benefits for personalized learning, academic support, and engagement in educational settings. However, little is known about how undergraduates perceive, their attitudes toward, and their usage of ChatGPT for learning purposes in the context of a university environment in North Central Nigeria.

The main purpose of the study is to examine the undergraduates' perception, attitude, and usage of ChatGPT for learning in University, North Central. Specifically, this study:

- (i) Examine undergraduate perception of the use of ChatGPT for learning Kwara State.
- (ii) Investigate undergraduate attitude on the use of ChatGPT for Learning Kwara State.
- (iii) Examine undergraduate utilisation of ChatGPT for learning in Kwara State.
- (iv) Assess undergraduate perception of the use of ChatGPT for learning based on gender in Kwara State.
- (v) Examined undergraduate attitude on the use of ChatGPT for learning based on gender in Kwara State.
- (vi) Assess undergraduate perception of the use of ChatGPT for learning based on school ownership in Kwara State.
- (vii) Examined undergraduate attitude on the use of ChatGPT for learning based on school ownership in Kwara State.

The research questions are in the following:

- (i) What is the perception of undergraduates on the use of ChatGPT for learning in Kwara State?
- (ii) What is the attitude of undergraduates on the use of ChatGPT for Learning in Kwara State?
- (iii) What is the undergraduate utilization of ChatGPT for learning in Kwara State?

Research Hypotheses are in the following

- (i) What is the difference between male and female undergraduates' perceptions of the use of ChatGPT for learning based on gender in Kwara State?
- (ii) What is the difference between male and female undergraduates' attitudes on the use of ChatGPT for learning based on gender in Kwara State?
- (iii) Does school ownership influence undergraduate perception of using ChatGPT for learning in Kwara State?
- (iv) Does school ownership influence undergraduate attitudes toward using ChatGPT for learning in Kwara State?

## 2. METHODS

This study employed a descriptive survey research design to investigate undergraduate students' perceptions, attitudes, and utilization of ChatGPT for learning across universities in Kwara State, Nigeria. The descriptive survey method was selected due to its effectiveness in collecting detailed information from a large population, allowing the researchers to describe the current status of a phenomenon as it exists.

The target population comprised all undergraduate students enrolled in federal, state, and private universities in Kwara State. A multi-stage sampling approach was adopted. First, purposive sampling was used to select universities based on ownership—federal, state, and private. A convenience sampling strategy was applied to select the private university, while simple random sampling was used to select individual students from each institution.

A total of 120 undergraduate students were selected from the three university categories out of an estimated student population of 65,000 across the state. The final sample included 48 males (40%) and 72 females (60%), ensuring a diverse representation across gender and institution types.

The primary data collection tool was a questionnaire titled “Undergraduate Perception, Attitude, and Usage of ChatGPT for Learning Questionnaire” (UPAUCLQ). The instrument was structured into four sections:

- (i) Section A: Demographic Information (e.g., gender, institutional type).
- (ii) Section B: Items measuring perception (5-point Likert scale: Strongly Disagree to Strongly Agree).
- (iii) Section C: Items measuring attitude (5-point Likert scale).
- (iv) Section D: Items assessing actual utilization of ChatGPT.

The questionnaire was reviewed by experts in educational technology and measurement and evaluation to ensure content validity. A pilot study was conducted with 20 students outside the selected sample to establish reliability, resulting in a Cronbach’s alpha coefficient of 0.81, indicating high internal consistency.

After obtaining ethical clearance and permissions from relevant university authorities, the researchers administered the questionnaire in person. Participation was voluntary, and respondents were assured of the confidentiality and anonymity of their responses. Clear instructions were provided, and clarification was given where necessary.

The collected data were coded and entered into the Statistical Package for Social Sciences (SPSS), version 25, for analysis. Descriptive statistics, such as frequencies, percentages, means, and standard deviations, were used to answer the research questions. Inferential statistics—*independent sampled t-tests* and *one-way Analysis of Variance (ANOVA)*—were used to test the hypotheses at a 0.05 level of significance.

### 3. RESULTS AND DISCUSSION

#### 3.1. Results

**Table 1** presents the gender distribution of respondents, revealing that out of a total sample of 120 individuals, 48 are male (40.0%), and 72 are female (60.0%).

**Table 1.** Distribution of respondents based on gender.

Gender	Frequency	%
Male	48	40
Female	72	60
Total	120	100

**Table 2** shows the distribution of respondents by school type among a total sample of 120 individuals. The largest group comes from federal schools, with 52 respondents (43.3%), followed by state school respondents at 40 (33.3%), and private school respondents at 28 (23.3%).

### 3.1.1. Research question 1: What is the perception of undergraduates on the use of ChatGPT for learning in Kwara State?

**Table 3** shows that undergraduates in Kwara State generally have a positive perception of using ChatGPT for learning, with strong agreement across all five items. For each statement (1 to 5), most respondents selected either "Agree" or "Strongly Agree," with mean scores ranging from 3.30 to 3.57, resulting in an overall average mean of 3.41. This suggests that students perceive ChatGPT as a beneficial tool in their academic activities. This is in line with the findings of other researchers.

**Table 1.** Perception of undergraduates on the use of ChatGPT for learning in Kwara State?

Item	SD		D		A		SA		Mean
	F	%	F	%	F	%	F	%	
ChatGPT can enhance my learning experience.	0	0.0%	0	0.0%	52	43.3%	68	56.7%	3.57
ChatGPT provides reliable information for my studies.	0	0.0%	16	13.3%	52	43.3%	52	43.3%	3.30
ChatGPT is an effective tool for learning complex topics.	0	0.0%	12	10.0%	44	36.7%	64	53.3%	3.43
ChatGPT can simplify my study process.	0	0.0%	8	6.7%	56	46.7%	56	46.7%	3.40
ChatGPT supports my academic success.	0	0.0%	12	10.0%	56	46.7%	52	43.3%	3.33
Average mean									3.41

### 3.1.2. Research question 2: What is the attitude of undergraduates on the use of ChatGPT for Learning in Kwara State?

**Table 4** on undergraduates' attitudes toward ChatGPT for learning in Kwara State reveals a generally positive view. Most students rated the items (a1 to a5) in the "Agree" or "Strongly Agree" categories, with mean scores between 3.17 and 3.47 and an overall average mean of 3.31. This data suggests that a significant majority of students see ChatGPT as beneficial in academic contexts, though there is some variation in enthusiasm across the items. This is corroborated by the findings of other reports (Le & Van Tran, 2024).

**Table 2.** Attitude of undergraduates on the use of ChatGPT for Learning in Kwara State?

Item	SD		D		A		SA		Mean
	F	%	F	%	F	%	F	%	
I am excited to use ChatGPT as a learning tool.	0	0.0%	16	13.3%	36	30.0%	68	56.7%	3.43
I feel confident in using ChatGPT for academic purposes.	0	0.0%	16	13.3%	68	56.7%	36	30.0%	3.17
I find it enjoyable to learn using ChatGPT.	0	0.0%	8	6.7%	48	40.0%	64	53.3%	3.47
I am open to using ChatGPT for future assignments.	4	3.3%	16	13.3%	40	33.3%	60	50.0%	3.30
I trust ChatGPT for academic assistance.	0	0.0%	20	16.7%	56	46.7%	44	36.7%	3.20
Average mean									3.31

### 3.1.3. Research question 3: What is the undergraduate utilization of ChatGPT for learning in Kwara State?

**Table 5** regarding undergraduates' utilization of ChatGPT for learning in Kwara State indicates generally positive engagement, with mean scores ranging from 2.93 to 3.47 and an average of 3.22. Most students agree or strongly agree on ChatGPT's benefits, though there's a moderate level of disagreement on specific items, such as practical application or ethical concerns. This goes with the findings of other reports.

**Table 3.** Undergraduate utilization of ChatGPT for learning in Kwara State?

Item	SD		D		A		SA		Mean
	F	%	F	%	F	%	F	%	
I use ChatGPT to research academic topics.	4	3.3%	8	6.7%	52	43.3%	56	46.7%	3.33
I frequently use ChatGPT to clarify difficult concepts.	0	0.0%	4	3.3%	56	46.7%	60	50.0%	3.47
I rely on ChatGPT for study assistance during exams.	0	0.0%	40	33.3%	48	40.0%	32	26.7%	2.93
I use ChatGPT as a primary resource for academic queries.	0	0.0%	12	10.0%	68	56.7%	40	33.3%	3.23
I incorporate ChatGPT into my daily study routine.	4	3.3%	16	13.3%	60	50.0%	40	33.3%	3.13
Average mean									3.22

### 3.2. Research Hypothesis

#### 3.2.1. Research hypothesis 1: What is the difference between male and female undergraduates' perceptions of the use of ChatGPT for learning based on gender in Kwara State?

**Table 6** shows the results. The independent samples t-test results in this table show a significant difference in ChatGPT perception scores between male and female undergraduates, with males (mean = 3.75, SD = 0.438) rating ChatGPT higher than females (mean = 3.44, SD = 0.500). Given the p-value of 0.001, which is less than the significance level of 0.05, we reject the null hypothesis, suggesting a significant gender difference in perceptions. This is in line with the findings of other researchers (Bouzar *et al.*, 2024).

**Table 4.** Independent sampled t-test showing significant difference between male and female undergraduates' perceptions of the use of ChatGPT for learning in Kwara State.

Gender	N	X	SD	df	t	Sig. (2-tailed)	Decision
Male	48	3.75	0.438	118	3.442	0.001	Rejected
Female	72	3.44	0.500				

#### 3.2.2. Research hypothesis 2: What is the difference between male and female undergraduates' attitudes on the use of ChatGPT for learning based on gender in Kwara State?

The independent samples t-test shown in **Table 7** comparing male and female undergraduates' attitudes toward using ChatGPT in Kwara State reveals a significant difference ( $t = -3.244$ ,  $p = 0.002$ ). The mean attitude score for females ( $M = 3.61$ ) is higher than for males ( $M = 3.25$ ), suggesting that female students hold a more positive attitude toward ChatGPT for learning purposes. Since  $p < 0.05$ , we reject the null hypothesis and conclude that there is a significant difference in attitudes between genders. This is against the findings of other reports (Lin *et al.*, 2024), which posit that Registered nurses show positive attitudes towards ChatGPT, with males generally more familiar with and comfortable using it.

**Table 5.** Independent sampled t-test showing significant difference between male and female undergraduates' attitudes on the use of ChatGPT for learning in Kwara State.

Gender	N	X	SD	df	t	Sig. (2-tailed)	Decision
Male	48	3.25	0.601	118	-3.244	0.002	Rejected
Female	72	3.61	0.595				

### 3.2.3. Research hypothesis 3: Does school ownership influence undergraduate perception of using ChatGPT for learning in Kwara State?

The analysis in **Table 8** shows that the variation attributed to school ownership, represented by the "Between Groups" sum of squares, is 1.845. This results in a mean square of 0.922 over 2 degrees of freedom, reflecting differences among the three school ownership categories. In contrast, the "Within Groups" sum of squares is 27.622, with a mean square of 0.236 across 117 degrees of freedom, capturing individual variations not associated with school ownership. The calculated F statistic is 3.907, and the p-value is 0.023. Since this p-value is below the significance value of 0.05, the null hypothesis of no difference in perceptions of ChatGPT use across the school ownership categories is rejected. This is in support of the findings of other reports (Al-Khalid & Ahmed, 2023).

**Table 6.** One-way ANOVA showing a significant difference in school ownership on the undergraduate perception of the use of ChatGPT for learning in Kwara State.

Variables	Sum of Squares	df	Mean Square	F	Sig.	Decision
Between Groups	1.845	2	0.922	3.907	0.023	
Within Groups	27.622	117	0.236			Rejected
Total	29.467	119				

### 3.2.3. Research hypothesis 4: Does school ownership influence undergraduate attitudes toward using ChatGPT for learning in Kwara State?

The analysis in **Table 9** shows that the variation between groups, represented by a sum of squares of 0.486 and a mean square of 0.243 over 2 degrees of freedom, is minimal. In contrast, the within-group variation, which accounts for individual differences unrelated to school ownership, is much larger, with a sum of squares of 45.380 and a mean square of 0.388 across 117 degrees of freedom. The F-statistic of 0.627 is relatively low, and the corresponding significance level (p-value) is 0.536, which is above the significance value of 0.05. Therefore, the null hypothesis is retained, indicating that school ownership does not significantly influence undergraduate attitudes toward ChatGPT use for learning.

**Table 7.** One-way ANOVA showing a significant difference in school ownership on undergraduate attitudes toward the use of ChatGPT for learning in Kwara State.

Variables	Sum of Squares	df	Mean Square	F	Sig.	Decision
Between Groups	0.486	2	0.243	0.627	0.536	
Within Groups	45.380	117	0.388			Accepted
Total	45.867	119				

### 3.3. Discussion

The findings from this study indicate that undergraduate students in Kwara State generally perceive ChatGPT as a valuable educational tool because it simplifies learning processes, enhances access to information, and supports academic success. This is reflected in the high mean scores observed across the perception, attitude, and utilisation scales. The results align with earlier studies that highlight ChatGPT's utility in simplifying complex tasks and enhancing educational outcomes (Le & Van Tran, 2024).

Students appreciate ChatGPT because it provides a convenient and efficient means of acquiring academic support outside traditional classroom settings. With an average perception mean of 3.41, it is evident that students find the tool beneficial for exploring

complex topics, understanding difficult concepts, and obtaining explanations in simpler language. This perception is reinforced by the role of ChatGPT in fostering personalized learning experiences and boosting self-paced study habits (Acosta-Enriquez *et al.*, 2024).

Attitudinal responses further affirm this positive view, as students exhibit enthusiasm and confidence in using ChatGPT for their studies. Because students find the tool both enjoyable and reliable, it contributes to higher levels of motivation and engagement. This mirrors the assertions of other reports (Naweed-E-Sehar, 2024), which concluded that AI tools like ChatGPT promote constructive educational environments when used effectively (Naweed-E-Sehar, 2024).

However, gender-based differences emerged, with male students reporting higher perceptions of ChatGPT's usefulness while female students exhibited more positive attitudes. This difference may arise because males tend to explore technological tools more deeply, while females are more cautious and focused on ethical implications, including concerns over over-reliance and data privacy (Bouzar *et al.*, 2024). These variations suggest the need for gender-responsive AI integration strategies in higher education to balance enthusiasm with responsible usage.

The analysis also shows that students from federal universities exhibit higher perceptions of ChatGPT than their counterparts in state and private institutions. This could be because federal institutions typically offer more exposure to technology and house more diverse student populations, fostering a broader spectrum of engagement with AI tools (Al-Khalid & Ahmed, 2023). In contrast, private universities, though often better equipped, may enforce stricter guidelines, thereby limiting usage freedom and exploration.

Interestingly, while institutional ownership influenced perception, it did not significantly affect students' attitudes. This might be because attitudes are more influenced by personal values and prior experiences with technology than by institutional culture (Che *et al.*, 2021; Oluwaseun *et al.*, 2023).

Utilization results reveal that students actively use ChatGPT for academic research and understanding challenging concepts, although fewer rely on it during exams. This indicates that while students value ChatGPT as a study aid, they may hesitate to use it in high-stakes contexts because of trust issues or institutional restrictions. The mean utilization score of 3.22 demonstrates moderate but meaningful engagement with the tool, echoing past research that noted ChatGPT's effectiveness for clarifying difficult academic content (Giray *et al.*, 2024; Kocyigit & Zhaksylyk, 2023).

Concerns over ethical use and academic integrity remain. Some respondents expressed reservations about fully depending on ChatGPT, especially for assignments or examinations. This hesitancy is understandable because reliance on AI for academic tasks might lead to reduced critical thinking and a potential increase in plagiarism, which several scholars have also identified as a growing concern in AI-assisted education.

Furthermore, the TAM framework helps explain these results. Students' use of ChatGPT is influenced by their perception of its usefulness and ease of use. Because most respondents found ChatGPT user-friendly and beneficial, their likelihood of accepting and utilizing the tool increased, aligning with the Technology Acceptance Model's core assumptions (Marjan *et al.*, 2018; Islami *et al.*, 2021).

These insights show that while students are largely receptive to ChatGPT, there is a pressing need for educational institutions to guide its responsible use. Because ChatGPT is rapidly being integrated into learning ecosystems, educators must ensure that it is leveraged to complement—not replace—traditional academic practices (Aithal & Aithal, 2023).

Recommendations are in the following:

- (i) Establish institutional policies and guidelines for ChatGPT usage. Universities should create clear protocols for when and how ChatGPT can be used to support learning, helping prevent misuse and maintain academic standards (Naweed-E-Sehar, 2024).
- (ii) Integrate AI literacy into academic curricula. AI literacy programs should teach students how to use ChatGPT responsibly, evaluate its output critically, and understand ethical implications (Acosta-Enriquez *et al.*, 2024).
- (iii) Promote equitable access across all types of institutions. Efforts should be made to ensure students in private and state universities have the same access to AI tools as those in federal institutions to reduce the digital divide (Al-Khalid & Ahmed, 2023).
- (iv) Address gender-related gaps in technology adoption. Educational interventions should be designed to support both male and female students by acknowledging different patterns of technology use and addressing specific concerns, such as privacy or over-reliance (Bouzar *et al.*, 2024).
- (v) Conduct awareness campaigns and workshops on the ethical use of AI. Regular training and seminars should be organized to promote responsible use of ChatGPT and prevent academic misconduct, plagiarism, and dependency.

#### 4. CONCLUSION

This study explored undergraduate students' perceptions, attitudes, and usage of ChatGPT for learning in universities in Kwara State, Nigeria. The findings revealed that most students have a positive perception of ChatGPT because it enhances learning efficiency, supports comprehension, and simplifies academic tasks. While male students perceived ChatGPT as more useful, female students demonstrated a more positive attitude toward its use, indicating nuanced differences in how each gender approaches AI technology.

Furthermore, the type of university—federal, state, or private—also influenced the perception of ChatGPT. Federal university students reported higher levels of engagement, suggesting a correlation between institutional resources and students' familiarity with digital tools. However, attitudes did not differ significantly across institutions, implying that personal experience and digital literacy may be more impactful than school ownership.

Despite these positive perceptions and attitudes, concerns remain about over-reliance on AI tools, ethical usage, and the potential erosion of critical thinking. As ChatGPT and similar technologies become more prevalent in education, universities need to strike a balance between embracing innovation and preserving academic integrity.

#### 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.

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