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***Correspondence**
Simeon Ayoade Adedokun

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Bridging the Divide: Assessing the Awareness-to-Utilization Gap of Generative AI Tools for Personalized Learning in Nigerian Higher Education

Simeon Ayoade Adedokun[1*], Isiak Akinwumi Adeyemo[2], & Dorcas Atinuke Adedokun[3]
Department of Computer Science, Ladoke Akintola University of Technology, Ogbomoso, Nigeria.

Abstract

This study investigated the levels of awareness and utilization of Generative Artificial Intelligence (GenAI) for personalized learning among undergraduates in Nigeria, with the primary objective of quantifying the existence and identifying the predictors of the awareness-to-utilization gap. A total of 150 undergraduates were sampled from three universities (federal, state, and private) using a stratified random sampling technique. Data were collected via a questionnaire and analyzed using descriptive statistics, paired samples t-tests, and multiple linear regression. The findings confirmed a high level of GenAI awareness (M = 3.98) and a significantly lower level of GenAI utilization (M = 3.70), thereby validating the existence of a statistically significant gap ($t(149) = 4.457$, $p < 0.001$). Furthermore, the multiple linear regression analysis revealed that GenAI awareness (GenAI_A) was the only significant predictor of utilization ($B = 0.492$, $p < 0.001$). Significantly, demographic factors (age, gender) and institutional affiliation were found to be non-significant predictors ($p > 0.05$). The study concludes that the challenge to full GenAI adoption is not rooted in students' lack of knowledge or acceptance, but rather in systemic and infrastructural barriers (facilitating conditions), which equally constrain all student groups, regardless of their personal characteristics. It is recommended that Nigerian Higher Education Institutions shift focus from awareness campaigns to strengthening infrastructural capacity and policy frameworks to enable the consistent translation of awareness into practical use.

Keywords

Artificial Intelligence, Generative AI, GenAI, Awareness, Utilization, Personalized Learning, Higher Education, Awareness-to-Utilization Gap, Technology Adoption, UTAUT, Nigerian Universities

Introduction

The global tertiary education sector is currently experiencing a profound technological shift, driven primarily by the integration of Artificial Intelligence (AI) into core pedagogical practices. The rapid proliferation of Generative Artificial Intelligence (GenAI) tools, such as ChatGPT and Gemini, presents a transformative opportunity for Personalized Learning (PL) in higher education.

Personalized Learning (PL) leverages AI's capacity for rapid data processing and pattern recognition to tailor educational content, pace, and feedback to the unique needs and abilities of individual students [1], [2]. In this paradigm, AI transcends simple automation, becoming a vital tool for achieving highly customized, adaptive, and student-centered educational outcomes.

The most recent and disruptive evolution in this domain is the widespread emergence of Generative Artificial Intelligence (GenAI), characterized by sophisticated Large Language Models (LLMs) such as ChatGPT and Gemini. These tools are fundamentally changing the dynamics of learning by empowering students with the capacity for on-demand content summarization, idea generation, drafting assistance, and access to sophisticated intelligent tutoring systems. These capabilities directly support self-regulated learning and provide instantaneous, high-quality feedback, making GenAI a powerful driver for truly personalized academic experiences [3].

Despite the undeniable global momentum of AI integration, its practical realization is often uneven, particularly within the diverse environment of higher education institutions (HEIs) in developing economies like Nigeria. Research on technology adoption in the Nigerian context has consistently highlighted challenges related to infrastructural deficits, financial constraints, and variance in digital literacy among students [4]. This raises a critical question, like "Are Nigerian undergraduates effectively translating their awareness of GenAI's potential into practical academic utilization?"

Preliminary studies indicate a potential awareness-to-utilization gap, where students are theoretically informed about the benefits of AI, yet their engagement in its practical, academic application remains low due to factors like access, cost, skill deficiency, or institutional policy. Nwodu (2025) noted that a significant segment of communication undergraduates in Nigerian universities reported limited awareness and restricted access to AI tools, a finding that suggests utilization would naturally be curtailed [4]. While the perception of AI's impact on student development—including engagement and academic achievement—is often positive [1], a lack of empirical evidence quantifying the actual usage of these specific GenAI tools in Nigerian HEIs persists.

This study, therefore, aims to systematically investigate and quantify the disparity between the awareness of GenAI tools for personalized learning and their actual utilization among undergraduate students. The study provides empirically grounded insights into the current state of GenAI adoption in Nigerian higher education, moving beyond anecdotal evidence to establish the precise magnitude of this potential gap through the use of a robust quantitative approach.

Literature Review

GenAI in Higher Education

Generative AI tools are increasingly being integrated into higher education globally, with the potential to revolutionize personalized learning by enabling real-time adaptation and content co-creation. Educators and students alike are navigating new affordances and challenges, including ethical issues, academic integrity, and equitable access [5], [6], [7]. Researchers argue that many institutions lack formal policies, creating what they call a "shadow pedagogy" where students employ AI without institutional guidance [5], [6]. More specifically, a study examine how GenAI tools shape assessment practices in higher education, noting both the potential for enhancing critical thinking and the risk of undermining learning when used unethically [8].

Within the Nigerian context, research examines generative AI adoption in Nigerian higher education, finding strong willingness to use it with adequate training, but also low utilization for mentoring and administrative tasks [9]. Another research highlights infrastructural deficits, affordability, and lack of data governance in their analysis of GenAI influence in Nigerian universities [10].

The Promise of Personalized Learning

Personalized Learning (PL) is fundamentally about tailoring instructional methods and content to maximize student engagement and performance. AI supports this by automating feedback, providing intelligent tutoring, and curating customized learning paths [1]. The efficacy of AI in enhancing student outcomes, including academic performance and

engagement, has been empirically supported in global studies [2]. However, as these studies are often conducted in resource-rich environments, their findings do not automatically translate to the Nigerian context, where infrastructural and access challenges are often prevalent.

AI-driven platforms have shown an ability to significantly impact student development by providing personalized learning pathways, intelligent tutoring systems, and smart content [1]. Globally, studies confirm a positive correlation between AI integration and students' perceived personalization, leading to benefits like instantaneous feedback, self-paced learning, and higher motivation [2]. Specifically, GenAI tools are utilized for knowledge construction and augmentation, and efficiency and support. Students use tools for generating and refining ideas, simplifying complex concepts, and obtaining targeted explanations, which supports a mastery-oriented learning approach [3], [11], [12]. GenAI functions as a supplementary instructor, helping with tasks like drafting abstracts, summarizing academic papers, and curating supplementary reading materials [13]. A study focusing on AI use among students in health sciences found high utilization for accessing accurate information and supporting academic tasks like homework and grammar checks [5].

Recent studies focusing on AI adoption in Nigeria have affirmed its perceived benefits. Research on adaptive learning software, even in low-resource settings, has demonstrated substantial learning gains, highlighting AI's potential to significantly improve learning outcomes when properly implemented [14]. Furthermore, Adedokun (2025) found a strong level of awareness and significant utilization of GenAI for adaptive learning among students in Nigeria, correlating this with factors like tool availability and lecturer encouragement [5]. This localized evidence establishes the relevance of GenAI and PL in the Nigerian context.

Barriers and the Utilization Gap

Despite the documented pedagogical promise and rising student awareness, the transition to widespread GenAI utilization in Nigerian HEIs is hindered by several formidable contextual barriers, which directly contribute to the observed gap. The first set of barriers are connected to infrastructural and economic constraints. The utilization of sophisticated GenAI models requires a robust technological foundation—a condition often unmet in Nigerian HEIs [3], [11]. These barriers include the digital divide and cost implications. Unequal access to electricity, stable internet connectivity, and personal computing devices create a massive divide [3], [13]. Survey results cite weak internet connectivity (80% of respondents) and epileptic power supply as the main infrastructural limitations to AI use. In addition, high costs of data and devices, coupled with subscription fees for premium GenAI services, pose a significant financial constraint for students, limiting their ability to move from free (limited) access to full utilization [13].

Beyond physical access, the effective utilization of GenAI is constrained by the human and institutional response, which are referred to as competence and policy gaps. The associated barriers include digital literacy and institutional ambiguity. The rapid deployment of GenAI has outpaced institutional policy development. The lack of clear, ethical guidelines from universities on the appropriate use of these tools for assignments and research fosters student hesitation and discourages consistent utilization for fear of violating academic integrity rules [5], [13]. While AI is perceived as highly useful and awareness of GenAI is rising, the current literature strongly suggests that the absence of adequate Facilitating Conditions and clarity in institutional policy—factors outside the student's direct control—are the primary determinants of the gap between awareness and utilization observed in this study.

Conceptual Framework: Technology Acceptance and the Gap

This study is primarily grounded in the Technology Acceptance Model (TAM), which posits that a user's intention to use a new technology is determined by two core beliefs, which are Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) [15], [16]. Perceived Usefulness (PU) in the context of GenAI for PL refers to the student's belief that using tools such as ChatGPT and Gemini for content summarization or idea generation will enhance their academic performance and study efficiency [1], [2]. Perceived Ease of Use (PEOU), on the other hand, reflects the degree to which a student believes that using GenAI tools is free of effort. Low PEOU, perhaps due to weak internet infrastructure or lack of specific digital literacy training, can directly inhibit utilization, even if PU is high. In the Nigerian GenAI context, socio-cultural norms and institutional infrastructure, however, mediate these perceptions [13].

While TAM explains acceptance, it often falls short in explaining the transition from intention (awareness/acceptance) to actual behavior (utilization) in a resource-constrained environment [17]. Therefore, the study also implicitly draws on the Unified Theory of Acceptance and Use of Technology (UTAUT), which incorporates "Facilitating Conditions" [16], [18]. In the Nigerian context, these conditions—including stable electricity, affordable internet, and institutional support—are critical determinants that largely dictate the utilization rate, regardless of individual awareness or perception [4], [17].

Research Questions

The specific research questions guiding this investigation are:

1. What is the level of Awareness/Utilization of GenAI tools for personalized learning among undergraduates?
2. Is there a statistically significant difference between undergraduates' mean Awareness score and their mean Utilization score for GenAI tools for personalized learning?

Research Hypothesis

Ho1: There is no statistically significant difference between the mean Awareness score and the mean Utilization score of GenAI tools for personalized learning among undergraduates.

Ho2: GenAI Awareness (GenAI_A), demographic factors, and institutional affiliation do not significantly predict GenAI Utilization (GenAI_U) among undergraduates.

Materials And Methods

This study adopted a quantitative survey research design. The target population comprised undergraduate students from three (3) universities across Federal, State, and Private universities in Oyo State. The purposively selected universities were the University of Ibadan (UI – a federal university), Ladoke Akintola University of Technology, Ogbomoso (LAUTECH – a state university), and Ajayi Crowther University, Oyo (ACU – a private university). The diverse sample, spanning federal, state, and private universities, facilitated a comparative assessment of technology adoption and enhanced the external validity of the findings across Nigerian higher education settings with different ownership structures, making the findings of the study more representative and generalizable to the broader Nigerian university system because the research design accounted for the diverse student demographics, institutional policies, and infrastructural conditions.

The total sample size for the study was 150 undergraduate students, with 50 participants randomly selected from each of the three university categories. This balanced allocation ensured that the findings were not skewed toward any single institutional ownership structure, ensuring that the sample accurately reflects the varying exposure and experience levels potentially linked to AI usage in different postgraduate research stages.

Data was collected using a questionnaire titled Artificial Intelligence and Personalized Learning Questionnaire (AIPLQ). The focus variables for this paper are the Likert-scale items addressing Awareness and Utilization of GenAI tools, specifically content creation and summarization tools. The questionnaire is structured into three sections. Section A was designated for demographic data, while Section B comprised 5-point Likert scale items on awareness and utilization of AI for personalized learning. Section C assessed the students' perception of the impact of AI on their academic performance and engagement using a 5-point Likert scale. The survey was conducted online using Google Forms, shared with participants electronically via email, WhatsApp, Telegram, and Facebook.

The data analysis focused on two primary constructs, both measured on a 5-point Likert Scale (1.00 – 5.00): GenAI Awareness (GenAI_A) and GenAI Utilization (GenAI_U). These scores were generated by computing the arithmetic mean of all corresponding survey items related to Generative AI tools. GenAI_A represents the overall level of students' knowledge about these tools, while GenAI_U represents the frequency of their practical use for academic purposes, allowing for a direct quantitative assessment of the Awareness-to-Utilization Gap. A pilot study collected data from 20 non-participating respondents and conducted reliability analysis using Cronbach's Alpha (α) coefficient in SPSS, which

produced a calculated coefficient of 0.941. This means the scale has good and highly acceptable internal reliability. The data gathered for the full study were analyzed using descriptive statistical analysis to establish the levels of awareness and utilization, inferential statistics (a Paired Samples t-test) to test the hypothesized difference between the two constructs, and regression analysis to analyze the potential moderators and predictors for GenAI utilization, all facilitated by SPSS software at the 0.05 level of significance.

Results

The demographic distribution of the sample (N = 150) ensures that the findings are representative of the stratified sampling design employed, covering federal, state, and private universities. Table 1 presents the demographic characteristics of the respondents.

Table 1: Distribution of Respondents by Demographic Variables

Demographic Variable	Category	Frequency (N)	Percentage (%)
Name of Institution	Ajayi Crowther University, Oyo (Private)	50	33.33
	LAUTECH Ogbomoso (State)	50	33.33
	University of Ibadan (Federal)	50	33.33
Gender	Male	75	50.00
	Female	75	50.00
Level of Study	100 Level	32	21.33
	200 Level	29	19.33
	300 Level	31	20.67
	400 Level	22	14.67
	500 Level	21	14.00
	600 Level	15	10.00
Age (N=150)	Mean Age	20 years	-
	Standard Deviation	2.58	-

As presented in Table 1, the data confirms equal representation across the three university ownership categories (33.33% each) and a perfectly balanced gender distribution (50% Male, 50% Female). The largest groups were from 100 Level (21.33%), 300 Level (20.67%), and 200 Level (19.33%), indicating a strong representation from the lower academic levels. The mean age of the respondents is 20 years (SD = 2.58).

Descriptive Analysis of GenAI Awareness and Utilization

Research Questions 1 sought to establish the mean levels of GenAI Awareness (GenAI_A) and GenAI Utilization (GenAI_U). Table 2 presents the descriptive statistics for these two composite variables, both measured on a 5-point Likert scale (1.00 – 5.00).

Table 2: Descriptive Analysis of GenAI Awareness and Utilization

Variable	N	Mean	Std. Deviation	Std. Error Mean
GenAI Awareness (GenAI_A)	150	3.980	0.679	0.055
GenAI Utilization (GenAI_U)	150	3.695	0.776	0.063

The mean score for GenAI Awareness is M = 3.98, indicating a high level of awareness among the undergraduates. The mean score for GenAI Utilization is M = 3.70, which suggests a moderate-to-high level of use. Importantly, the mean score for awareness is numerically higher than the mean score for utilization.

Inferential Analysis for The Awareness-to-Utilization Gap

The Paired Samples t-test, shown in Table 3 and Table 3, was conducted to answer research question 2 and test Ho1.

Table 3: Paired Samples Statistics (GenAI Awareness vs. Utilization)

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1: GenAI_A	3.980	150	0.679	0.055
Pair 1: GenAI_U	3.695	150	0.776	0.063

Table 4: Paired Samples t-test Results

	Paired Differences			t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean			
Pair 1: GenAI_A - GenAI_U	0.285	0.783	0.064	4.457	149	0.000

The result of the Paired Samples t-test, as presented in Table 3 and Table 4, yielded a t-statistic of 4.457 with 149 degrees of freedom and a p-value of 0.000, indicating a statistically significant difference between GenAI Awareness and GenAI Utilization among undergraduates. Since the p-value is less than the significance level of 0.05, the null hypothesis is rejected. This confirms that a statistically significant awareness-to-utilization gap exists. The positive mean difference of 0.285 confirms that the mean awareness score is significantly higher than the mean utilization score, quantifying the magnitude of the awareness-to-utilization gap. Figure 1 provides a visual comparison of the mean scores for the two constructs, clearly illustrating the significant disparity confirmed by the t-test.

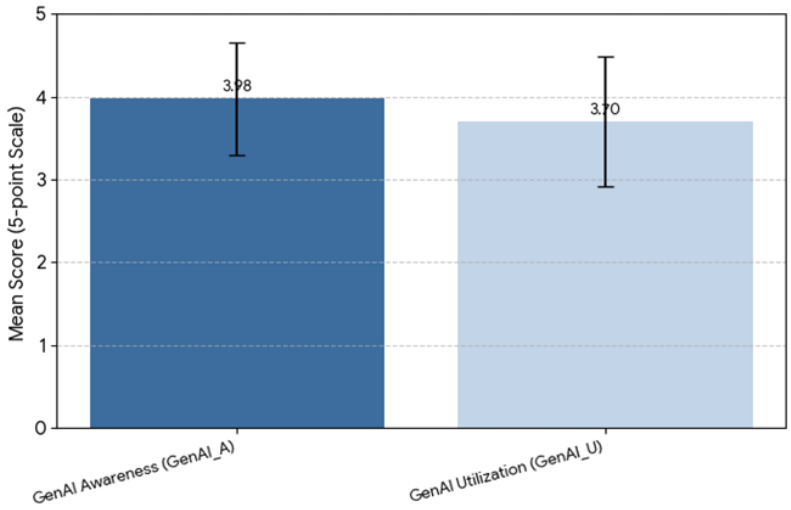

Figure 1: Comparison of Mean Scores for Awareness and Utilization

Note. Figure 1 clearly illustrates the magnitude and direction of the gap, with GenAI Awareness being visibly higher than GenAI Utilization, supported by the results of the t-test. The error bars, representing the standard deviation, also show that utilization has a slightly higher spread, suggesting greater variability in usage habits compared to awareness levels.

Analysis of Predictors of GenAI Utilization

A multiple linear regression analysis was conducted to test Ho2 by determining the predictive strength of GenAI Awareness, Age, Gender, and Institution on GenAI Utilization.

Table 5: Model Summary of Predictors for GenAI Utilization

	R	R^2	Adjusted R^2	Std. Error of the Estimate
Model 1	0.443	0.196	0.168	0.708

As shown in Table 5, the predictors collectively explained 19.6% (R2 = 0.196) of the variance in GenAI Utilization, which is a small-to-medium effect. The adjusted R2 was 0.168.

Table 6: Coefficients of the Multiple Linear Regression

Predictor Variable	B	Std. Error	t	Sig.
(Constant)	1.970	0.532	3.703	0.000
GenAI Awareness (GenAI_A)	0.492	0.089	5.515	0.000
Age	-0.016	0.024	-0.682	0.497
Gender (Male)	0.028	0.119	0.234	0.815
Institution (LAUTECH)	0.175	0.144	1.213	0.227
Institution (UI)	0.030	0.146	0.206	0.837

Note: Reference categories are Gender (Female) and Institution (Ajayi Crowther University).

As shown in Table 6, the regression results show that GenAI Awareness (GenAI_A) is the only statistically significant individual predictor of utilization ($B = 0.492$, $t = 5.515$, $p < 0.001$). This strong positive coefficient indicates that for every 1-point increase in a student's GenAI Awareness score, their GenAI Utilization score is predicted to increase by 0.492 points, demonstrating a strong link between knowledge and use. Conversely, Ho3 is not rejected for the demographic variables, as none of the demographic variables in the model (Age, Gender, or Institution) was a statistically significant predictor of GenAI Utilization for personalized learning ($p > 0.05$). This suggests that the decision to utilize GenAI tools is primarily driven by the student's level of awareness rather than their personal or institutional characteristics.

Discussion

The findings of the study demonstrate a high level of GenAI Awareness regarding the application and potential of GenAI tools for personalized learning, with a mean score of M=3.98, but their actual GenAI Utilization (M = 3.70) is statistically lower than the level of awareness. These suggest that the current generation of students is well-informed about the capabilities of modern AI technologies like ChatGPT and Gemini. The students are indeed using the tools for academic purposes, but their frequency and depth of utilization do not fully match their knowledge of the tools' potential. The Paired Samples t-test confirmed a statistically significant awareness-to-utilization gap ($t(149) = 4.457$, $p<0.001$). The significant difference highlights a clear disconnection between the students' cognitive acceptance of GenAI's usefulness and their demonstrated behavioral use. This disparity suggests that the challenge to fully adopting GenAI for personalized learning in Nigerian higher education is not rooted in students' lack of knowledge or acceptance but rather in systemic and infrastructural barriers (such as poor internet connectivity and high data costs) that prevent the consistent translation of awareness into practical, high-frequency academic use.

The empirical results of this study provide crucial insight into the current state of GenAI technology adoption within Nigerian higher education institutions (HEIs). The core finding is the confirmation of an awareness-to-utilization gap, where the mean level of GenAI awareness ($M = 3.98$) significantly exceeds the mean level of GenAI Utilization ($M = 3.70$, $t(149) = 4.457$, $p < 0.001$).

The high mean score for GenAI Awareness ($M = 3.98$) aligns with global trends following the rapid mainstreaming of Generative AI tools since late 2022 [3]. Students are evidently exposed to, and knowledgeable about, these technologies, indicating a low cognitive barrier to acceptance. In the context of the Technology Acceptance Model (TAM), this high awareness suggests a strong pre-existing perception of the technology's Perceived Usefulness (PU), where students recognize that GenAI can enhance learning, improve academic outcomes, and boost efficiency [13]. This positive perception forms the initial critical component necessary for technology adoption [15], [16]. Furthermore, the high awareness level is consistent with a recent study on adaptive learning among Nigerian students, which also found a strong level of awareness of AI tools, particularly those relevant to academic support [5]. This consensus indicates that Nigerian HEIs no longer face the initial hurdle of convincing students about the relevance of AI, but rather, the more complex challenge of facilitating its practical application.

Despite the high awareness, the utilization score ($M = 3.70$) is significantly lower, which is the key finding of the study. This gap represents the failure of high Perceived Usefulness to translate into fully consistent and frequent Actual Use.

This finding directly supports the need to move beyond TAM to frameworks like the Unified Theory of Acceptance and Use of Technology (UTAUT) [18]. While TAM components like PU may be strong, UTAUT introduces the concept of facilitating conditions, which dictate whether an individual can physically and organizationally utilize the technology. As suggested in research on technology adoption in Nigerian HEIs, these external factors are the primary bottlenecks [16], [17]. Specifically, the gap is likely caused by infrastructural deficits, such as point to poor electricity, weak internet connectivity, and the high cost of data and devices as major inhibitors to technology use [13]. Even if a student is highly aware of a cloud-based GenAI tool, intermittent power supply or unaffordable data plans impose a ceiling on utilization frequency, regardless of the perceived benefit.

The Multiple Linear Regression analysis provides crucial empirical support for the theoretical basis of the utilization gap. The model demonstrated that the variance in GenAI Utilization is overwhelmingly driven by one factor, which is GenAI Awareness ($B = 0.492$, $p < 0.001$). This strong predictive relationship is a core tenet of technology adoption models, affirming that a student's knowledge and recognition of the technology's benefits (i.e., Perceived Usefulness) is the most powerful internal motivator for its use [15], [16]. However, the lack of predictive power for all the demographic and institutional variables suggests uniformity of barriers and a focus on facilitating conditions.

Therefore, the utilization score may be constrained by institutional factors and training gaps, such as the lack of clear institutional AI policies or adequate digital literacy training for GenAI tools [13]. Students may hesitate to fully utilize tools in assignments due to fears of plagiarism or ethical violations, and data privacy concerns, thus keeping the utilization score moderate rather than high. This finding echoes the World Bank's observation that while technology can have a transformative impact in low-resource settings, successful implementation is conditional on the proper design and context of use [14]; it is also in line with the finding that data privacy concern dominates the prioritization of AI ethical concerns, suggesting implementation of robust data protection mechanisms and clear, auditable processes, coupled with the introduction of ethical training into the curriculum [5], [19].

Conclusion

The significant difference between awareness (a form of cognitive acceptance) and utilization (actual behavior) tested in this study is essentially a measure of how successfully perceived usefulness translates into actual use when mediated by facilitating conditions. While Nigerian undergraduates conceptually embrace the promise of GenAI for personalized learning with high perceived usefulness, the translation of this awareness into consistent academic practice is significantly hampered. This gap is interpreted as being largely driven by prevailing infrastructural and contextual barriers, such as weak internet access, high data costs, and the lack of clear institutional policies, which restrict the students' facilitating conditions and perceived ease of use. The finding that age, gender, and institutional affiliation are not significant predictors demonstrates that the gap is not a function of student characteristics. This strengthens the conclusion that the difficulty in translating awareness into frequent use is caused by systemic and infrastructural barriers (facilitating conditions) that restrict all student groups equally.

Therefore, the adoption challenge in Nigerian higher education is not one of ignorance or unwillingness, but one of systemic and infrastructural enablement. The statistically significant gap confirms that the next phase of GenAI integration in Nigerian universities must shift focus from raising awareness to strengthening the facilitating conditions and implementing robust policy structures to bridge the divide between theoretical knowledge and practical application.

References

1) N. J. K. Abdullahi, “Managing Artificial Intelligence-Driven Platforms for Student Development,” Int. J. Eng. Technol. Nat. Sci., vol. 7, no. 1, pp. 75–86, 2025, doi: 10.46923/ijets.v7i1.467.
2) A. Kamil, D. F. ul H. Shah, S. Atif, S. Hayat, S. Aziz, and A. Nisar, “ROLE OF ARTIFICIAL INTELLIGENCE IN PERSONALIZED LEARNING,” Contemp. J. Soc. Sci. Rev., vol. 3, no. 3, pp. 667–680, 2025, doi: 10.63878/cjssr.v3i3.1011.

3) K. H. Frith, “ChatGPT: Disruptive Educational Technology,” Nurs. Educ. Perspect., vol. 44, no. 3, pp. 198–199, May 2023, doi: 10.1097/01.NEP.0000000000001129.
4) G. E. Nwodu, “Awareness and Perception of the Use of Artificial Intelligence for Learning Among Select Communication Undergraduates in Nigeria,” Afr. J. Soc. Sci. Humanit. Res., vol. 8, no. 1, pp. 113–130, 2025, doi: 10.52589/ajsshr-qke2a0eg.
5) S. A. Adedokun, D. A. Adedokun, S. K. Ogunkan, and O. K. Ogunniyi, “Data Privacy Dominance: An Empirical Investigation into Nigerian Postgraduate Students’ Prioritization of AI Ethical Concerns in Higher Education,” Int. J. Latest Technol. Eng. Manag. Appl. Sci., vol. 14, no. 10, pp. 712–719, Nov. 2025, doi: 10.51583/IJLTEMAS.2025.1410000088.
6) A. Mazaheriyan and E. Nourbakhsh, “Beyond the Hype: Critical Analysis of Student Motivations and Ethical Boundaries in Educational AI Use in Higher Education,” 2025, arXiv. doi: 10.48550/ARXIV.2511.11369.
7) A. Ghimire, J. Prather, and J. Edwards, “Generative AI in Education: A Study of Educators’ Awareness, Sentiments, and Influencing Factors,” Mar. 22, 2024, arXiv: arXiv:2403.15586. doi: 10.48550/arXiv.2403.15586.
8) B. Ogunleye, K. I. Zakariyyah, O. Ajao, O. Olayinka, and H. Sharma, “Higher education assessment practice in the era of generative AI tools,” 2024, doi: 10.48550/ARXIV.2404.01036.
9) O. T. Ebiringa, C. O. Ikerionwu, A. I. Erike, and B. C. Asiegbu, “Generative AI Adoption in Nigerian Higher Education: Benefits, Challenges, and Opportunities,” Afr. J. Humanit. Contemp. Educ. Res., vol. 20, no. 1, pp. 285–304, Oct. 2025, doi: 10.62154/ajhcer.2025.020.01028.
10) O. Peters and H. T. Olojede, “Influence of Generative Artificial Intelligence (GenAI) in Nigerian Higher Education,” Àgídìgbo ABUAD J. Humanit., vol. 13, no. 1, pp. 233–244, June 2025, doi: 10.53982/agidigbo.2025.1301.17-j.
11) E. Sabzalieva and A. Valentini, “ChatGPT and artificial intelligence in higher education.” United Nations Educational, Scientific and Cultural Organization, 2023. Accessed: Nov. 19, 2025. [Online]. Available: https://unesdoc.unesco.org/ark:/48223/pf0000385146
12) Y. Jin, L. Yan, V. Echeverria, D. Gašević, and R. Martinez-Maldonado, “Generative AI in higher education: A global perspective of institutional adoption policies and guidelines,” Comput. Educ. Artif. Intell., vol. 8, p. 100348, June 2025, doi: 10.1016/j.caeai.2024.100348.
13) O. Peters and H. T. Olojede, “Influence of Generative Artificial Intelligence (GenAI) in Nigerian Higher Education,” Àgídìgbo ABUAD J. Humanit., vol. 13, no. 1, pp. 233–244, June 2025, doi: 10.53982/agidigbo.2025.1301.17-j.
14) M. De Simone, F. Tiberti, M. B. Rodriguez, F. Manolio, W. Mosuro, and E. J. Dikoru, “From Chalkboards to Chatbots : Evaluating the Impact of Generative AI on Learning Outcomes in Nigeria.” World Bank Group: Education Global Department, May 2025. Accessed: Nov. 19, 2025. [Online]. Available: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099548105192529324
15) F. D. Davis, “Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology,” MIS Q., vol. 13, no. 3, p. 319, Sept. 1989, doi: 10.2307/249008.
16) Y. B. Kankia, “A Technology Adoption Framework and a Digital Literacy Model of Cloud Computing Services in Higher Education in Nigeria,” doctoral, University of Hertfordshire, 2025. Accessed: Nov. 19, 2025. [Online]. Available: https://uhra.herts.ac.uk/id/eprint/25992/
17) M. Adamu and P. Benachour, “Analysing the Integration of Models of Technology Diffusion and Acceptance in Nigerian Higher Education:,” in Proceedings of the 12th International Conference on Computer Supported Education, Prague, Czech Republic: SCITEPRESS - Science and Technology Publications, 2020, pp. 178–187. doi: 10.5220/0009572101780187.
18) Venkatesh, Morris, Davis, and Davis, “User Acceptance of Information Technology: Toward a Unified View,” MIS Q., vol. 27, no. 3, p. 425, 2003, doi: 10.2307/30036540.
19) S. A. Adedokun, “The Integration of Artificial Intelligence in Nursing Research: A Framework for Enhanced Data Management and Evidence-Based Practice,” in From Novice to Expert: Nurturing Nursing Research Skills, College of Health Sciences, LAUTECH Ogbomoso: ResearchGate, 2024. doi: 10.13140/RG.2.2.29746.26569.