

Student attitudes towards disclosure of GenAI in academic writing: A multidisciplinary study of undergraduate students in Nigerian universities

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Abstract

This study investigated undergraduate students' use and disclosure of generative artificial intelligence in Nigerian universities. The study was motivated by concerns about transparency, authorship, originality, and accountability as students use artificial intelligence to support academic writing. A cross sectional survey design was adopted. Data were collected from 240 undergraduate students selected through purposive and convenience sampling from universities across the six geopolitical zones in Nigeria. The findings showed that students used ChatGPT, Meta AI, and Google Gemini, whereas specialised tools were used to a limited extent. Students demonstrated high awareness of disclosure requirements and generally favourable attitudes towards declaring artificial intelligence assistance as a means of promoting accountability, honesty, and originality. However, unclear university policies, inconsistent lecturer interpretations, fear of accusation, stigma, punishment, and negative effects on grades discouraged disclosure. Greater awareness of disclosure was significantly associated with more favourable attitudes, while attitudes did not differ significantly across disciplinary clusters. The study concluded that students recognised the ethical importance of disclosure but required institutional support to translate their awareness into consistent practice. It recommended harmonised university policies, standard disclosure formats, lecturer guidance, supportive assessment procedures, and integrated artificial intelligence literacy programmes to promote transparent, responsible, and accountable use in academic writing.

Introduction

The emergence of generative artificial intelligence (GenAI) has introduced a major transformation in the ways university students access information, develop ideas, and produce academic content. Unlike conventional digital tools that primarily retrieve, store, or organise existing information, GenAI systems can generate human-like text, images, audio, code, and other forms of content in response to user prompts. Tools such as ChatGPT, Google Gemini, Microsoft Copilot, Claude, Grammarly, QuillBot, DeepSeek, Meta AI, and other specialised platforms are increasingly incorporated into students' academic activities. They are used for brainstorming, literature searching, summarising texts, paraphrasing passages, correcting grammatical errors, translating content, generating outlines, drafting assignments, and improving the clarity of academic writing (Dwivedi et al., 2023; Kasneci et al., 2023; Johnston et al., 2024; Sousa & Cardoso, 2025). Their accessibility, speed, conversational interfaces, and perceived usefulness have made them attractive learning and writing resources for undergraduate students across disciplines (Baidoo-Anu et al., 2024; Shahzad et al., 2024; Strzelecki, 2024).

The educational value of GenAI is increasingly recognised. When used appropriately, these tools can support personalised learning, reduce language barriers, facilitate idea development, improve writing quality, and provide students with immediate assistance during demanding academic tasks. They may also help students organise complex information, explore alternative explanations, and refine the structure and presentation of their written work (Kasneci et al., 2023; Tlili et al., 2023; Baek et al., 2024). AI-powered writing assistants such as Grammarly and QuillBot can help students identify grammatical

problems, improve sentence construction, and revise their texts more efficiently (Nazari et al., 2021; Amyatun & Kholis, 2023). Conversational and multimodal systems such as ChatGPT, Gemini, Copilot, and Claude provide broader support for content generation, summarisation, research assistance, problem-solving, and academic communication (Ngo, 2023; Baidoo-Anu et al., 2024; Johnston et al., 2024). However, the increasing integration of these tools into academic writing has made it difficult to distinguish between legitimate technological assistance and the inappropriate substitution of AI-generated content for students' intellectual contributions.

This difficulty has placed GenAI disclosure at the centre of contemporary debates about academic integrity. GenAI disclosure refers to the explicit acknowledgement that an artificial intelligence tool contributed to the planning, generation, revision, editing, or presentation of an academic work. Such disclosure may indicate the particular tool used, the purpose for which it was employed, the part of the work it influenced, and the extent of its contribution (El Ali et al., 2024; Heywood & Armstrong, 2024). Disclosure does not necessarily imply academic misconduct. Rather, it provides information that enables lecturers, assessors, and readers to evaluate the respective contributions of the student and the AI system. It also promotes transparency, accountability, honest authorship attribution, and confidence in the integrity of academic assessment. Consequently, the ethical concern is not merely whether students use GenAI, but whether its use is permitted, critically controlled, appropriately acknowledged, and consistent with the learning outcomes of the academic task.

The absence of disclosure may create significant academic and educational problems. When AI-generated ideas or texts are submitted without acknowledgement, lecturers may attribute knowledge, writing ability, analytical competence, and originality to students who did not independently produce all aspects of the submitted work. Undisclosed use can therefore obscure authorship, weaken confidence in assessment outcomes, and make it difficult to determine whether students have acquired the competencies that their assignments are intended to demonstrate. It may also expose students to inaccurate information, fabricated references, plagiarism, copyright disputes, privacy concerns, and overdependence on automated systems (Cotton et al., 2023; Dwivedi et al., 2023; Kasneci et al., 2023; Wang et al., 2025). These concerns have encouraged calls for higher education institutions to move beyond an exclusive reliance on AI-detection mechanisms and develop transparent frameworks for responsible use, acknowledgement, verification, and human accountability.

Nevertheless, disclosure is not simply an individual ethical choice. Students' willingness to disclose GenAI use may be shaped by their awareness of institutional expectations, understanding of academic integrity, perception of AI assistance, trust in lecturers, fear of punishment, and confidence in the fairness of disclosure procedures. Awareness in this context concerns whether students understand what GenAI disclosure means, recognise when acknowledgement is necessary, know how disclosure should be made, and can differentiate acceptable assistance from academic misconduct. Available studies suggest that familiarity with GenAI tools does not automatically translate into an adequate understanding of disclosure requirements. Students may be experienced users of AI technologies while remaining uncertain about the ethical boundaries governing their application to academic writing (Kelly

et al., 2023; Siraj & Duke, 2025; Ono et al., 2025; Rismanchian et al., 2026). This distinction is important because students cannot be expected to disclose AI assistance consistently when institutional expectations are unknown, ambiguous, or communicated differently by individual lecturers.

Students' attitudes also occupy a central position in understanding disclosure. Attitude encompasses their beliefs, feelings, evaluations, willingness, and behavioural intentions concerning the acknowledgement of GenAI use. A positive attitude may be reflected in the belief that disclosure demonstrates honesty, improves accountability, and should become a standard component of academic writing. A negative or reluctant attitude may be evident when students view disclosure as unnecessary, embarrassing, risky, or capable of reducing their grades and exposing them to disciplinary action. These attitudes contain cognitive, affective, and behavioural elements: what students know or believe about disclosure, how they feel about declaring AI assistance, and whether they intend to disclose their use in practice. Students may accept disclosure as an ethical principle while still avoiding it because of anticipated stigma, evaluation anxiety, privacy concerns, or uncertainty about how lecturers will respond (Chan & Hu, 2023; Vetter et al., 2025; Du & He, 2026; Qu & Wang, 2026).

The relationship between awareness and attitude is particularly important. Greater awareness of disclosure requirements may foster favourable attitudes by helping students understand that acknowledgement is a mechanism for transparency rather than an automatic admission of misconduct. Conversely, limited awareness can generate uncertainty, fear, and inconsistent disclosure practices. This relationship can be understood through the Theory of Planned Behaviour, which proposes that behaviour is influenced by an individual's attitude toward the behaviour, perceived social expectations, and perceived control over performing it (Ajzen, 1991). Applied to the present study, a student's intention to disclose GenAI use may depend on whether disclosure is regarded as valuable or threatening, whether lecturers and peers expect it, and whether the student knows how to make an appropriate declaration. Students may therefore be less willing to disclose when university policies are unclear, lecturer expectations are inconsistent, and disclosure procedures are perceived as punitive. They may be more willing to do so when institutional guidance is clear, disclosure mechanisms are accessible, and responsible AI use is supported through education rather than fear.

Several challenges may prevent students from translating ethical awareness into actual disclosure. These include the absence of clear university policies, inadequate AI literacy education, uncertainty about acceptable levels of AI assistance, fear of accusations, lecturer stigma, concern about disciplinary action, embarrassment, and the belief that disclosure could adversely affect grades. Students may also consider some AI systems, particularly grammar checkers and paraphrasing applications, to be ordinary writing aids that do not require acknowledgement. Differences in the functions of GenAI tools further complicate disclosure decisions because generating an entire essay, improving grammar, suggesting a title, producing an image, and summarising a source do not represent the same level of AI contribution. Without clear distinctions, students may conceal substantial AI involvement, unnecessarily disclose minor assistance, or make inconsistent decisions across courses and academic tasks (Bearman et al.,

2023; El Ali et al., 2024; Vetter et al., 2025; Kirsanov et al., 2026). Disclosure must therefore be examined within the institutional and social environment in which students make these decisions.

This issue is especially important in Nigerian higher education, where undergraduate engagement with digital learning technologies and GenAI tools is increasing, but institution-wide frameworks for responsible AI use remain uneven. Existing Nigerian studies have largely concentrated on students' awareness, perceptions, acceptance, and utilisation of artificial intelligence for academic activities (Nnaemeka & Ogunbadejo, 2024; Essien et al., 2024; Hassan & Harande, 2025; Ono et al., 2025). Although these studies provide valuable evidence of expanding AI engagement, they offer limited explanation of whether students understand disclosure, how they perceive the declaration of AI assistance, and what prevents them from acknowledging its use. Evidence from other national contexts cannot be applied uncritically to Nigeria because disclosure attitudes may be influenced by local institutional policies, disciplinary cultures, levels of AI literacy, access to digital resources, lecturer practices, and perceptions of academic authority. There is consequently a need for empirical evidence drawn from undergraduates across universities, faculties, academic levels, and geographical areas in Nigeria.

The central problem is that GenAI use in academic writing is expanding more rapidly than the policies and educational practices required to govern its disclosure. Although students may rely on GenAI for different academic purposes, it remains uncertain whether they recognise the need to disclose such assistance, possess favourable attitudes toward declaration, or feel safe enough to disclose it. Nondisclosure may represent intentional concealment, but it may also arise from inadequate awareness, policy ambiguity, uncertainty about disclosure procedures, inconsistent lecturer expectations, or fear of sanctions. Treating every case of nondisclosure as deliberate misconduct may therefore overlook the institutional and educational conditions influencing students' decisions. At the same time, ignoring nondisclosure may weaken authorship accountability, assessment credibility, and public confidence in university qualifications.

Against this background, the present study investigated GenAI use and disclosure in academic writing among undergraduate students across Nigerian universities. Specifically, it examined the extent to which different GenAI tools are used, determined students' awareness of disclosure requirements, assessed their attitudes toward declaring GenAI use, and identified the challenges affecting disclosure. It also examined the association between students' awareness of GenAI disclosure and their attitudes toward declaration. By bringing these constructs together, the study moves beyond documenting the popularity of GenAI tools to explain the ethical and institutional conditions surrounding their acknowledgement. Its findings are expected to support the development of clear disclosure policies, consistent lecturer guidance, AI literacy programmes, and fair procedures that promote responsible GenAI use without discouraging legitimate technological support for learning and academic writing.

Statement of the Problem

The growing use of generative artificial intelligence (GenAI) has transformed academic writing by enabling undergraduate students to generate ideas, summarise literature, paraphrase texts, correct grammatical errors, develop outlines, and draft academic content. Although these applications can improve writing efficiency and support learning, their use raises concerns about transparency, authorship, originality, and academic accountability when students do not acknowledge the assistance received from GenAI tools (Cotton et al., 2023; Dwivedi et al., 2023; Kasneci et al., 2023). Disclosure is therefore essential because it distinguishes legitimate academic support from unacknowledged AI-generated contributions and enables lecturers to assess students' actual knowledge and competencies. Despite the ethical importance of disclosure, students may use GenAI in academic writing without declaring such use. This nondisclosure may arise from inadequate awareness of disclosure requirements, uncertainty about what constitutes substantial AI assistance, fear of punishment, anticipated stigma, concerns about grades, or the absence of clear and consistently implemented institutional policies (Bearman et al., 2023; El Ali et al., 2024; Vetter et al., 2025; Du & He, 2026). Consequently, it remains difficult to determine whether students conceal GenAI use deliberately to claim sole authorship or fail to disclose it because universities and lecturers have not provided sufficient guidance. This uncertainty threatens academic integrity, complicates the assessment of students' independent abilities, and may weaken confidence in the originality and credibility of academic work.

In Nigeria, existing studies have predominantly examined students' awareness, perceptions, acceptance, and utilisation of artificial intelligence for academic activities (Nnaemeka & Ogunbadejo, 2024; Essien et al., 2024; Hassan & Harande, 2025; Ono et al., 2025). A recent study specifically investigated students' attitudes toward declaring GenAI use in Nigerian library schools, thereby providing important evidence from Library and Information Science education (Idoko et al., 2026). However, its disciplinary focus limits understanding of disclosure among the wider undergraduate population. Evidence remains insufficient regarding the extent to which students from different disciplines and universities across Nigeria use various GenAI tools, understand disclosure requirements, hold favourable or unfavourable attitudes toward declaration, and encounter barriers to disclosure. The association between students' awareness of GenAI disclosure and their attitudes toward declaring its use also remains inadequately established in the Nigerian context. The problem, therefore, is not merely that undergraduates use GenAI in academic writing, but that the conditions under which they acknowledge or conceal such use are not sufficiently understood across Nigerian universities. Without comprehensive evidence, universities may develop policies that are ambiguous, excessively punitive, or disconnected from students' actual experiences. This study addresses these gaps by examining the extent of GenAI tool use, students' awareness of disclosure requirements, their attitudes toward declaring GenAI assistance, the challenges affecting disclosure, and the association between disclosure awareness and attitudes among undergraduates across Nigerian universities.

Objectives of the Study

The study investigated generative AI use and disclosure in academic writing among undergraduate students across Nigerian universities. Specifically, the study sought to:

1. determine the extent to which undergraduate students use different generative AI tools for academic writing;
2. determine undergraduate students' level of awareness of generative AI disclosure in academic writing;
3. examine undergraduate students' attitudes toward declaring the use of generative AI in academic writing;
4. identify the challenges affecting undergraduate students' disclosure of generative AI use in academic writing; and

Research Hypotheses

The following null hypotheses were tested at the 0.05 level of significance:

H₀₁

There is no significant association between undergraduate students' awareness of generative AI disclosure and their attitudes toward declaring its use in academic writing.

H₀₂

There is no significant difference in undergraduate students' attitudes toward declaring the use of generative AI in academic writing across disciplinary clusters.

Literature Review

Extent of Undergraduate Students' Use of Generative AI Tools

Generative artificial intelligence refers to computational systems capable of producing new text, images, audio, code, and other forms of content in response to user instructions or prompts. Unlike conventional information technologies that primarily retrieve or organise existing information, GenAI tools can generate contextually relevant outputs that resemble human-created content. Their growing availability has substantially changed how students approach learning, research, problem-solving, and academic writing (Dwivedi et al., 2023; Kasneci et al., 2023). In higher education, students use GenAI to brainstorm ideas, develop outlines, summarise texts, paraphrase passages, correct grammatical errors, translate content, locate information, generate references, and prepare initial drafts of assignments (Črček & Patekar, 2023; Johnston et al., 2024; Levine et al., 2025; Sousa & Cardoso, 2025). The use of GenAI among university students has been driven largely by its accessibility, speed, conversational nature, and perceived usefulness. Students are more likely to adopt these tools when they believe that the tools will improve their academic performance, reduce the time required to complete assignments, and simplify difficult writing or research tasks (Shahzad et al., 2024; Strzelecki, 2024). GenAI may also provide

personalised explanations and immediate responses, making it particularly attractive to students who require additional support with writing, language, or understanding complex concepts. However, the extent of use differs according to students' digital competence, academic discipline, experience with AI, access to technology, and the nature of the academic task being undertaken (Kelly et al., 2023; Abdaljalael et al., 2024). ChatGPT remains one of the most prominent GenAI tools used by students. Its widespread adoption is associated with its ability to respond conversationally to questions and support a range of tasks, including idea generation, drafting, summarisation, explanation, editing, and problem-solving (Ngo, 2023; Montenegro-Rueda et al., 2023). Evidence indicates that students perceive ChatGPT as useful for generating initial ideas, clarifying concepts, reorganising written content, and providing feedback during the writing process (Baek et al., 2024; Levine et al., 2025). Nevertheless, its apparent fluency may encourage students to accept generated responses without adequately evaluating their accuracy, originality, or appropriateness. Its usefulness therefore depends on students' capacity to verify outputs and maintain intellectual responsibility for the final work (Kasneci et al., 2023; Tlili et al., 2023). Other conversational and multimodal platforms, including Google Gemini, Microsoft Copilot, Claude, Meta AI, DeepSeek, and Grok, have expanded the range of AI-supported academic activities. These tools combine text generation with functions such as information retrieval, summarisation, reasoning, coding, image analysis, and content development. Their integration into existing digital platforms may also make them readily accessible to students during routine academic activities (Baidoo-Anu et al., 2024; Johnston et al., 2024). The increasing number of available platforms suggests that students' GenAI engagement should not be measured solely by their use of ChatGPT. A comprehensive assessment should consider the variety of tools available and the degree to which each is used for academic purposes. AI-powered writing assistants constitute another important category of GenAI tools. Grammarly and QuillBot are commonly used for grammatical correction, paraphrasing, vocabulary improvement, sentence restructuring, and enhancement of writing clarity. These tools can provide immediate feedback and help students improve the technical quality of their writing (Nazari et al., 2021; Amyatun & Kholis, 2023). Jasper and Writesonic also support brainstorming, content generation, outlining, summarisation, and language improvement. Although such tools may enhance writing efficiency, excessive reliance on them can weaken students' independent writing skills and obscure the boundary between legitimate editing assistance and substantive AI-generated authorship (Zhao et al., 2024; Shabir, 2025). GenAI use has also expanded beyond text-based writing to creative and multimedia academic activities. Tools such as DALL-E, Midjourney, Adobe Firefly, and Ideogram support image generation and visual design, while Suno and ElevenLabs facilitate the production of music, speech, and other audio content. These systems may assist students in disciplines that require visual communication, creative design, multimedia presentations, and digital composition (Civit et al., 2024; Yan, 2024; Xu & Huang, 2024; Casini et al., 2025).

Undergraduate Students' Awareness of Generative AI Disclosure

GenAI disclosure involves acknowledging the contribution of an AI system to the preparation of academic work. An appropriate disclosure may identify the tool used, explain how it was used, and

clarify the extent to which it contributed to the submitted work (El Ali et al., 2024; Heywood & Armstrong, 2024). Disclosure promotes transparency by enabling lecturers and readers to distinguish students' intellectual contributions from content produced or substantially modified by AI. It also provides a basis for determining whether GenAI use complies with institutional policies and the requirements of a particular assignment. Awareness of GenAI disclosure extends beyond knowing that AI technologies exist. It includes understanding what constitutes AI assistance, recognising when disclosure is required, knowing how to make a declaration, understanding the academic consequences of nondisclosure, and differentiating acceptable support from academic misconduct. Students may be familiar with ChatGPT and other GenAI tools without possessing sufficient knowledge of the ethical and institutional requirements governing their use. Familiarity with the technology should therefore not be treated as equivalent to disclosure awareness (Kelly et al., 2023; Siraj & Duke, 2025; Rismanchian et al., 2026). The literature suggests that undergraduate students demonstrate uneven levels of awareness. Although many students understand that submitting an entirely AI-generated assignment may violate academic integrity principles, they may be uncertain about whether they should disclose the use of AI for brainstorming, outlining, grammar correction, paraphrasing, translation, or summarisation. Some regard AI writing applications as comparable to conventional spellcheckers or online search tools and consequently do not consider acknowledgement necessary (Rismanchian et al., 2026). This uncertainty reflects the difficulty of establishing a uniform disclosure threshold for tools that perform substantially different functions. Institutional guidance plays an important role in shaping students' awareness. Students who receive clear explanations of acceptable AI use, academic integrity requirements, and disclosure procedures are more likely to understand their responsibilities. In contrast, absent or inconsistent policies can leave students uncertain about when, where, and how to acknowledge AI assistance (Vetter et al., 2025; Kirsanov et al., 2026). Awareness may also vary across departments because lecturers may interpret GenAI use differently or impose different requirements. Consequently, a student may regard a particular form of AI assistance as acceptable in one course but prohibited or disclosable in another. Within Nigeria, studies have reported increasing awareness and use of AI tools among university students, but awareness of AI technology does not necessarily indicate an understanding of disclosure obligations. Much of the Nigerian literature has focused on general awareness, knowledge, perception, and utilisation rather than students' knowledge of how AI contributions should be acknowledged in academic writing (Nnaemeka & Ogunbadejo, 2024; Hassan & Harande, 2025; Ono et al., 2025). The investigation of disclosure among students in Nigerian library schools represents an important advancement, but its disciplinary scope does not establish the level of awareness among students across the broader range of academic disciplines and universities in the country (Idoko et al., 2026). There is therefore a need to examine whether Nigerian undergraduates understand disclosure requirements and can apply them to their academic writing.

Undergraduate Students' Attitudes Toward Declaring Generative AI Use

Attitude refers to an individual's favourable or unfavourable evaluation of a particular object, practice, or behaviour. In the context of GenAI disclosure, students' attitudes comprise their beliefs, feelings, preferences, willingness, and behavioural intentions regarding the declaration of AI assistance in academic work. Students' attitudes toward disclosure are not uniformly positive or negative. Some students view disclosure as an expression of honesty, accountability, and respect for academic integrity. Such students may believe that declaring AI assistance does not reduce the originality of their work, provided that the technology was used appropriately and the student retained responsibility for the final output. Awareness of the ethical purpose of disclosure can therefore encourage students to regard it as a normal component of responsible academic writing (Chan & Hu, 2023; Heywood & Armstrong, 2024). Other students may support disclosure in principle but remain unwilling to practise it. This apparent contradiction may occur when students believe that lecturers will interpret any declared AI use as cheating, intellectual weakness, or lack of originality. Students may consequently disclose only when directly required, when the assignment guidelines contain explicit instructions, or when they believe that their use can be detected. This demonstrates that favourable beliefs about transparency do not always result in actual disclosure behaviour (Vetter et al., 2025; Kirsanov et al., 2026). Psychological and institutional conditions also influence disclosure attitudes. Students are more willing to disclose when they perceive institutional policies as fair, lecturer responses as supportive, and disclosure procedures as clear. Psychological safety can reduce the fear that acknowledgement will automatically lead to accusation or punishment. Conversely, evaluation anxiety, perceived stigma, privacy concerns, and uncertainty about institutional expectations can reduce students' willingness to declare AI assistance (Du & He, 2026; Qu & Wang, 2026). Disclosure attitudes must therefore be understood within the educational environment rather than attributed exclusively to students' personal morality. The available Nigerian evidence suggests that students' attitudes toward GenAI are shaped by perceived usefulness, ethical awareness, institutional expectations, and sociocultural conditions (Essien et al., 2024; Ono et al., 2025). The study conducted among students in Nigerian library schools specifically demonstrated the emerging scholarly concern with attitudes toward declaring GenAI use (Idoko et al., 2026). Nevertheless, disclosure attitudes may differ across disciplines because academic writing conventions, assessment practices, digital competence, and the accepted role of technological assistance vary. Evidence from Library and Information Science students alone cannot sufficiently explain the attitudes of undergraduates from computing, engineering, education, agriculture, health sciences, social sciences, humanities, and other disciplines. A multidisciplinary investigation is therefore required.

Challenges Affecting Students' Disclosure of Generative AI Use

The disclosure of GenAI use is affected by interrelated institutional, educational, psychological, ethical, and practical challenges. A major institutional challenge is the absence of clear and consistently implemented university policies. Policies may prohibit unauthorised AI use without explaining what constitutes authorisation, the level of assistance that requires disclosure, or the format in which disclosure should be made. Where guidelines are vague, students must make individual judgements about practices that lecturers may later interpret differently (Bearman et al., 2023; El Ali et al., 2024).

Inadequate AI literacy is another significant challenge. Students may lack the knowledge required to distinguish between minor technical assistance and substantial AI contribution. They may also be unaware of the limitations of GenAI, including inaccurate information, fabricated references, bias, privacy risks, and copyright concerns. Without adequate AI and information literacy, nondisclosure may be unintentional because students do not recognise that their use of a tool has materially influenced the academic work. Ethical awareness is therefore necessary for students to evaluate both the appropriateness of GenAI use and the need for disclosure (Zhu et al., 2025; Ono et al., 2025; Rismanchian et al., 2026). Fear of negative consequences may discourage disclosure even when students understand its importance. Students may worry that lecturers will accuse them of misconduct, reduce their grades, reject their assignments, or initiate disciplinary proceedings. They may also fear embarrassment or stigmatisation by lecturers and classmates. Evidence suggests that students sometimes hide AI use because they perceive disclosure as carrying greater personal risk than nondisclosure (Vetter et al., 2025; Du & He, 2026; Kirsanov et al., 2026). Punitive institutional narratives may therefore undermine transparency by encouraging concealment. The diversity of GenAI tools further complicates disclosure. The ethical implications of correcting punctuation with a writing assistant differ from those of generating an entire essay, yet policies may treat both practices as equivalent. Similarly, using AI to create an outline, summarise a student-provided source, generate an image, or produce a complete written response represents different levels of contribution. When disclosure expectations fail to reflect these distinctions, students may perceive the requirements as unfair or impractical (El Ali et al., 2024). Effective policies must consequently explain not only whether disclosure is required but also how the extent and purpose of AI assistance should be reported.

Theoretical Framework

This study is anchored in the Theory of Planned Behaviour, which explains how individuals form intentions to perform a particular behaviour. The theory proposes that behavioural intention is determined by three principal factors: attitude toward the behaviour, subjective norms, and perceived behavioural control. Attitude concerns whether the individual evaluates the behaviour favourably or unfavourably; subjective norms refer to perceived social expectations or pressures to perform the behaviour; and perceived behavioural control concerns the individual's confidence and ability to perform it. Stronger behavioural intention generally increases the likelihood that the behaviour will occur, particularly when the individual possesses sufficient control over it (Ajzen, 1991). The Theory of Planned Behaviour has been applied in library and information-related studies to explain students' preference for print resources, adoption of electronic library services, intention to read e-books, and librarians' use of social media for marketing (Joo et al., 2019; Luo et al., 2021; Rahmat et al., 2022; Matthews & Johnson, 2023). These applications demonstrate the theory's usefulness in explaining how attitudes, social expectations, and perceived control shape individuals' acceptance and use of information resources and technologies. The theory is relevant to the present study because students' disclosure of GenAI use may depend on whether they regard disclosure as beneficial or threatening, whether lecturers and peers expect them to declare AI assistance, and whether they understand how to make such a declaration.

Clear policies and supportive lecturer expectations may strengthen students' perceived control and intention to disclose, while fear of punishment, stigma, and unclear guidelines may discourage disclosure. The theory therefore provides an appropriate framework for understanding undergraduate students' attitudes and intentions regarding the declaration of GenAI use in academic writing.

Gap in the Literature

The reviewed literature demonstrates that GenAI tools are increasingly used for text generation, writing improvement, information support, and multimedia content creation. It also shows that awareness, attitude, and disclosure challenges are closely connected. Students who understand disclosure requirements and perceive institutional policies as fair may be more willing to declare GenAI assistance, while those who face unclear policies, inadequate guidance, fear of punishment, stigma, and inconsistent lecturer expectations may be reluctant to do so. However, important gaps remain. Much of the literature emphasises GenAI adoption, usefulness, ethical risks, or academic integrity without examining disclosure as a distinct practice. Studies also frequently focus on ChatGPT, despite the growing availability of conversational, writing, research, visual, and audio-generation tools. Within Nigeria, the literature has concentrated mainly on general AI awareness and utilisation, while the study addressing disclosure attitudes was limited to students in library schools (Idoko et al., 2026). Notwithstanding, there is insufficient multidisciplinary evidence regarding the extent to which Nigerian undergraduates use different GenAI tools, their awareness of disclosure requirements, their attitudes toward declaration, and the challenges affecting disclosure. The present study addresses these gaps by examining the four constructs among undergraduates across different disciplines and Nigerian universities.

Methodology

Research Design

The study adopted a cross-sectional survey research design to investigate undergraduate students' use of generative artificial intelligence tools and their disclosure of such use in academic writing. The design enabled the researchers to collect data on respondents' awareness, attitudes, experiences, and disclosure challenges at a particular point in time without manipulating any of the variables. It was considered appropriate because cross-sectional surveys are suitable for examining prevailing attitudes, perceptions, intentions, and technology-use behaviours among a defined group of respondents within a limited period (Shahsavar & Choudhury, 2023; Ghanem et al., 2025; Tajima et al., 2025; Butt et al., 2026).

Population and Study Setting

The target population comprised undergraduate students enrolled in Nigerian universities. Undergraduates were selected because of their increasing exposure to GenAI tools and their frequent involvement in academic writing activities such as assignments, seminar papers, projects, reports, and other course-related tasks. To provide geographical coverage, universities were purposively selected

from each of Nigeria's six geopolitical zones, including the University of Abuja (North-Central zone); the University of Nigeria, Nsukka, Abia State University, Ututu, Abia State, and David Umahi Federal University of Health Sciences, Uburu, Ebonyi State (South-East zone); the University of Port Harcourt, Rivers State, and Federal University of Technology, Ikot Abasi, Akwa Ibom State (South-South zone); the University of Maiduguri (North-East zone), Bayero University Kano (North-West zone) and Olusegun Agagu University of Science and Technology, Okitikupa, Ondo State, and University of Lagos, Lagos State (South-West zone).

Sampling Technique and Sample Size

A multistage non-probability sampling procedure was employed. At the first stage, eleven universities were purposively selected to provide coverage of the six geopolitical zones of Nigeria. At the second stage, convenience sampling was used to recruit undergraduate students who were accessible and willing to participate in the survey. Convenience sampling was considered suitable because the study examined students' attitudes, perceptions, and experiences and required voluntary participation through an online survey. Similar approaches have been employed in studies investigating university students' experiences, attitudes, and behavioural intentions concerning GenAI technologies (Donadel & Zuin, 2026; Güngören et al., 2026). A total of 240 undergraduate students completed the questionnaire, and all 240 valid responses were included in the analysis.

Instrument for Data Collection

Data were collected using a structured questionnaire developed in accordance with the study objectives and the reviewed literature. The questionnaire consisted of two main sections. Section A collected respondents' demographic information, including gender, age, academic level, university type, geopolitical zone, and faculty or discipline. Section B comprised four subsections corresponding to the four substantive objectives of the study. These subsections measured the extent of students' use of different GenAI tools, their awareness of GenAI disclosure requirements, their attitudes toward declaring GenAI use, and the challenges affecting disclosure in academic writing. Section B contained 46 items. The first construct, which measured the extent of GenAI tool use, contained 16 items and was rated on a four-point scale of Very High Extent (4), High Extent (3), Low Extent (2), and Very Low Extent (1). The remaining three constructs contained 10 items each and were rated on a four-point agreement scale of Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The use of structured multi-item scales made it possible to obtain comparable responses and compute composite scores for the constructs under investigation (Yeni et al., 2026; Grills et al., 2026).

Validity of the Instrument

The questionnaire was subjected to content and face validation by three experts. The experts assessed the relevance, clarity, adequacy, and appropriateness of the items in relation to the objectives and constructs of the study. Their observations and recommendations were used to revise ambiguous expressions, improve item clarity, and strengthen the coverage of the questionnaire before it was administered to the respondents.

Reliability of the Instrument

A pilot test was conducted using 30 students who did not participate in the main study. The responses obtained from the pilot test were analysed using Cronbach’s alpha to determine the internal consistency of the instrument. Cronbach’s alpha was appropriate because the constructs were measured using multiple Likert-type items intended to assess related dimensions of respondents’ perceptions and experiences (Mahmood & Badrinarayanan, 2026; Zumitzavan, 2026). As presented in Table 1, the alpha coefficients for the four constructs ranged from 0.909 to 0.960, while the overall 46-item instrument produced an alpha coefficient of 0.967. These coefficients exceeded the commonly accepted minimum threshold of 0.70 and demonstrated that the individual constructs and the overall instrument possessed high internal consistency. The questionnaire was therefore considered reliable for the main study.

Table 1
Reliability Results for the Questionnaire

Construct	Number of items	Cronbach’s alpha	Interpretation
Extent of GenAI tool use	16	0.960	Excellent
Awareness of GenAI disclosure	10	0.930	Excellent
Attitudes toward declaring GenAI use	10	0.913	Excellent
Challenges affecting GenAI disclosure	10	0.909	Excellent
Overall instrument	46	0.967	Excellent

Method of Data Collection

The questionnaire was administered electronically using Google Forms within the periods of two (2) months. The survey link was distributed to undergraduate students through WhatsApp and Facebook platforms. Academic colleagues in the selected universities also assisted in sharing the survey link with eligible students. Before completing the questionnaire, prospective respondents were informed about the purpose of the study and invited to participate voluntarily. At the end of the data-collection period, 240 properly completed responses were obtained and used for the analysis.

Method of Data Analysis

The collected data were analysed using descriptive and inferential statistics. Frequencies and percentages were used to summarise respondents’ demographic characteristics. Mean and standard deviation were used to answer the four substantive research questions concerning the extent of GenAI tool use, awareness of disclosure, attitudes toward declaration, and disclosure challenges. For the four-point scales, a criterion mean of 2.50 was used. Items with mean scores of 2.50 or above were interpreted as high extent or agreement, as applicable, while items with mean scores below 2.50 were interpreted as low extent or disagreement. Composite scores were calculated for the awareness and attitude constructs before the inferential analysis. Pearson Product-Moment Correlation was used to

test the null hypothesis concerning the association between students’ awareness of GenAI disclosure and their attitudes toward declaring GenAI use. To determine whether attitudes toward declaring GenAI use differed according to students’ disciplines, the 14 disciplines reported in Table 3 were consolidated into four conceptually related disciplinary clusters. This consolidation was necessary because some disciplines had very small numbers of respondents, which would make separate comparisons statistically unreliable. The clusters comprised Science and Technology, Health and Medical Sciences, Social and Management Sciences, and Arts and Professional Studies (Table 2). Welch’s one-way analysis of variance was used because the disciplinary clusters had unequal sample sizes. The hypotheses were tested at the 0.05 level of significance. The null hypothesis was rejected when the probability value was less than 0.05 and retained when the probability value was equal to or greater than 0.05.

Table 2
Classification of disciplines

Disciplinary cluster	Disciplines included	N
Science and Technology	Agriculture, Computing and Information Technology, Engineering and Environmental Sciences, Natural and Applied Sciences	159
Health and Medical Sciences	Basic Medical Sciences, Health Sciences, Pharmacy, Veterinary Medicine	21
Social and Management Sciences	Management Sciences, Mass Communication, Social Sciences	40
Arts and Professional Studies	Arts and Humanities, Education, Law	20
Total		240

Ethical Considerations

Ethical principles governing voluntary participation, informed consent, confidentiality, and anonymity were observed. Respondents were informed about the purpose of the research before completing the questionnaire, and their consent was obtained. Participation was voluntary, and respondents were assured that their information would be used solely for research purposes. No personally identifying information was required, and the responses were reported collectively.

Results

This section presents the findings on undergraduate students’ use and disclosure of generative artificial intelligence in academic writing. The results cover respondents’ demographic characteristics, extent of GenAI tool use, awareness of disclosure requirements, attitudes towards declaring GenAI use, challenges affecting disclosure, and the hypotheses tested in the study.

Table 3
Demographic Characteristics of Respondents

Demographic information	Category	Frequency	Percent
Gender	Female	112	46.7
	Male	127	52.9
	Prefer not to say	1	0.4
Age Range	18–22 years	180	75.0
	23–27 years	40	16.7
	28 years and above	20	8.3
Academic Level	100 Level	89	37.1
	200 Level	71	29.6
	300 Level	38	15.8
	400 Level	23	9.6
	500 Level	12	5.0
	600 Level	7	2.9
University type	Federal	170	70.8
	Private	4	1.7
	State	66	27.5
Geo-Political Zone of Residence	North-Central	3	1.3
	North-East	4	1.7
	South-East	62	25.8
	South-South	146	60.8
	South-West	25	10.4
Discipline	Agriculture	33	13.8
	Arts and Humanities	1	0.4
	Basic Medical Sciences	7	2.9
	Computing and Information Technology	106	44.2
	Education	18	7.5
	Engineering and Environmental Sciences	4	1.7

Demographic information	Category	Frequency	Percent
	Health Sciences	12	5.0
	Law	1	0.4
	Management Sciences	15	6.3
	Mass Communication	1	0.4
	Natural and Applied Sciences	16	6.7
	Pharmacy	1	0.4
	Social Sciences	24	10.0
	Veterinary Medicine	1	0.4

Table 3 presents the demographic characteristics of the 240 respondents. The findings show that most respondents were male (52.9%), aged 18–22 years (75.0%), and studying at the 100 level (37.1%). Regarding university type, 70.8% attended federal universities, 27.5% attended state universities, and 1.7% attended private universities. Most respondents resided in the South-South geopolitical zone (60.8%), while the Faculty of Computing and Information Technology had the highest representation (44.2%). Overall, the respondents were predominantly young undergraduates from federal universities in Southern Nigeria.

Table 4
Extent of Use of GEN AI Tools

Extent of use of Gen AI tools	VHE	HE	LE	VLE	Mean	Std. Dev.
ChatGPT	139 (57.9)	71 (29.6)	19 (7.9)	11 (4.6)	3.41	0.823
Gemini (Google AI)	59 (24.6)	85 (35.4)	59 (24.6)	37 (15.4)	2.69	1.009
Microsoft Copilot	33 (13.8)	35 (14.6)	66 (27.5)	106 (44.2)	1.98	1.069
Elicit	21 (8.8)	28 (11.7)	61 (25.4)	130 (54.2)	1.75	0.975
DeepSeek	43 (17.9)	48 (20.0)	59 (24.6)	90 (37.5)	2.18	1.124
Propensity AI	26 (10.8)	36 (15.0)	45 (18.8)	133 (55.4)	1.81	1.052
DALL-E	20 (8.3)	30 (12.5)	56 (23.3)	134 (55.8)	1.73	0.974
Grok	40 (16.7)	60 (25.0)	57 (23.8)	83 (34.6)	2.24	1.101
Jasper	25 (10.4)	27 (11.3)	55 (22.9)	133 (55.4)	1.77	1.016
Writesonic	21 (8.8)	37 (15.4)	51 (21.3)	131 (54.6)	1.78	1.004
Claude	44 (18.3)	37 (15.4)	68 (28.3)	91 (37.9)	2.14	1.119
Midjourney	22 (9.2)	37 (15.4)	53 (22.1)	128 (53.3)	1.80	1.010
Ideogram	21 (8.8)	32 (13.3)	58 (24.2)	129 (53.8)	1.77	0.986
ElevenLabs	24 (10.0)	30 (12.5)	66 (27.5)	120 (50.0)	1.83	0.999
Suno	23 (9.6)	30 (12.5)	53 (22.1)	134 (55.8)	1.76	1.006
Meta AI	78 (32.5)	72 (30.0)	57 (23.8)	33 (13.8)	2.81	1.040

Table 4 presents the extent to which undergraduate students used GenAI tools. Based on the criterion mean of 2.50, ChatGPT (M = 3.41, SD = 0.823), Meta AI (M = 2.81, SD = 1.040), and Gemini (M = 2.69, SD = 1.009) were used to a high extent. ChatGPT was the most widely used tool, as 87.5% of the

respondents reported using it to a high or very high extent. All the other GenAI tools recorded mean scores below 2.50 and were therefore used to a low extent. DALL-E recorded the lowest level of use ($M = 1.73$, $SD = 0.974$). The findings indicate that students' use of GenAI was concentrated mainly on ChatGPT, Meta AI, and Gemini.

Table 5
Level of Awareness of GEN AI Disclosure

Awareness of Gen AI disclosure	SA	A	D	SD	Mean	Std. Dev.
I know that my university requires the disclosure of GenAI usage	64 (26.7)	130 (54.2)	34 (14.2)	12 (5.0)	3.03	0.757
I am aware that students are expected to disclose the use of GEN AI tools in academic writing	60 (25.0)	115 (47.9)	53 (22.1)	12 (5.0)	2.93	0.796
I understand what AI disclosure means in academic writing	81 (33.8)	125 (52.1)	22 (9.2)	12 (5.0)	3.15	0.767
My lecturer usually informs me of declaring the use of GEN AI	42 (17.5)	116 (48.3)	65 (27.1)	17 (7.1)	2.76	0.830
I understand that failing to disclose use of GenAI may count as misconduct	56 (23.3)	90 (37.5)	71 (29.6)	23 (9.6)	2.75	0.905
I know how to declare the use of GEN AI when used	50 (20.8)	120 (50.0)	60 (25.0)	10 (4.2)	2.87	0.756
I am aware of academic integrity rules concerning GenAI-generated content	79 (32.9)	115 (47.9)	34 (14.2)	12 (5.0)	3.09	0.807
I can differentiate between acceptable and unacceptable GenAI use in academic writing	71 (29.6)	115 (47.9)	41 (17.1)	13 (5.4)	3.02	0.811
I know that failing to disclose GenAI usage is considered academic misconduct	53 (22.1)	101 (42.1)	60 (25.0)	26 (10.8)	2.76	0.906
I am aware of policies regarding GenAI disclosure through journal and other academic outlets	57 (23.8)	116 (48.3)	52 (21.7)	15 (6.3)	2.89	0.821

Table 5 presents undergraduate students' level of awareness of GenAI disclosure. All the items recorded mean scores above the criterion mean of 2.50, indicating a high level of awareness. Respondents were most aware of what AI disclosure means in academic writing ($M = 3.15$, $SD = 0.767$), followed by academic integrity rules concerning GenAI-generated content ($M = 3.09$, $SD = 0.807$) and university requirements for disclosing GenAI use ($M = 3.03$, $SD = 0.757$). The lowest mean scores concerned understanding that failure to disclose GenAI use might constitute misconduct ($M = 2.75$, $SD = 0.905$) and knowing that nondisclosure was considered academic misconduct ($M = 2.76$, $SD = 0.906$). The findings

show that respondents were aware of GenAI disclosure requirements, although their awareness of the academic consequences of nondisclosure was comparatively lower.

Table 6
Attitude Towards Declaring the Use of GEN AI

Attitude towards declaring Gen AI	SA	A	D	SD	Mean	Std. Dev.
I feel comfortable disclosing the use of GEN AI in my assignments	60 (25.0)	94 (39.2)	74 (30.8)	12 (5.0)	2.84	0.858
I disclose my use of GEN AI only when asked to	61 (25.4)	129 (53.8)	43 (17.9)	7 (2.9)	3.02	0.743
I avoid disclosure of AI for fear of punishment	47 (19.6)	101 (42.1)	78 (32.5)	14 (5.8)	2.75	0.835
I declare the use of GEN AI to show academic honesty	59 (24.6)	108 (45.0)	58 (24.2)	15 (6.3)	2.88	0.852
I don't feel it is ethically right to disclose GenAI use	42 (17.5)	89 (37.1)	83 (34.6)	26 (10.8)	2.61	0.899
I believe GenAI declaration should become part of academic writing standard	66 (27.5)	123 (51.2)	42 (17.5)	9 (3.8)	3.02	0.776
I declare the use of GenAI only when doing seminar and term papers	53 (22.1)	91 (37.9)	81 (33.8)	15 (6.3)	2.76	0.868
Declaration of GenAI use does not reduce the originality of my work	73 (30.4)	115 (47.9)	41 (17.1)	11 (4.6)	3.04	0.812
My declaration of GenAI use makes me accountable	65 (27.1)	129 (53.8)	40 (16.7)	6 (2.5)	3.05	0.733
I will rather not reveal the usage of GenAI because of copyright and intellectual property issues	57 (23.8)	94 (39.2)	74 (30.8)	15 (6.3)	2.80	0.872

Table 6 presents undergraduate students' attitudes toward declaring the use of GenAI. Respondents agreed most strongly that declaring GenAI use made them accountable ($M = 3.05$, $SD = 0.733$), did not reduce the originality of their work ($M = 3.04$, $SD = 0.812$), and should become part of academic writing standards ($M = 3.02$, $SD = 0.776$). They also agreed that they disclosed GenAI use only when asked ($M = 3.02$, $SD = 0.743$). However, respondents expressed concerns about disclosing GenAI use because of punishment ($M = 2.75$, $SD = 0.835$) and copyright and intellectual property issues ($M = 2.80$, $SD = 0.872$). These findings indicate that although respondents recognised disclosure as promoting accountability and academic honesty, their attitudes were also influenced by fear and their tendency to disclose GenAI use only under specific conditions.

Table 7
Challenges Affecting Declaration of GEN AI Use

Challenges affecting declaring of GenAI	SA	A	D	SD	Mean	Std. Dev.
Lack of clear university policies	90 (37.5)	114 (47.5)	30 (12.5)	6 (2.5)	3.20	0.750
Fear of being accused of using generative AI	79 (32.9)	110 (45.8)	41 (17.1)	10 (4.2)	3.08	0.815
I do not know how to properly declare the use of GenAI in my assignments	53 (22.1)	95 (39.6)	79 (32.9)	13 (5.4)	2.78	0.850
Poor awareness of GenAI disclosure practices	66 (27.5)	109 (45.4)	51 (21.3)	14 (5.8)	2.95	0.849
The fear of stigmatization by lecturers and colleagues	84 (35.0)	102 (42.5)	37 (15.4)	17 (7.1)	3.05	0.888
I avoid disclosure because lecturers interpret GenAI use from a different perspective	88 (36.7)	104 (43.3)	42 (17.5)	6 (2.5)	3.14	0.790
I may be embarrassed to admit using GenAI tools	68 (28.3)	94 (39.2)	62 (25.8)	16 (6.7)	2.89	0.894
I fear disciplinary action if I disclose AI use	71 (29.6)	94 (39.2)	63 (26.3)	12 (5.0)	2.93	0.870
The benefits of disclosure are not clear to me	66 (27.5)	104 (43.3)	58 (24.2)	12 (5.0)	2.93	0.846
I worry that disclosure may negatively affect my grades	90 (37.5)	87 (36.3)	50 (20.8)	13 (5.4)	3.06	0.894

Table 7 presents the challenges affecting undergraduate students' declaration of GenAI use. All the identified challenges recorded mean scores above the criterion mean of 2.50, showing that they affected disclosure. The most prominent challenge was the lack of clear university policies ($M = 3.20$, $SD = 0.750$), followed by lecturers' differing interpretations of GenAI use ($M = 3.14$, $SD = 0.790$), fear of being accused of using GenAI ($M = 3.08$, $SD = 0.815$), and concern that disclosure might negatively affect students' grades ($M = 3.06$, $SD = 0.894$). Not knowing how to declare GenAI use properly recorded the lowest mean score ($M = 2.78$, $SD = 0.850$), although it remained a challenge. The results indicate that unclear institutional policies, inconsistent lecturer expectations, fear of negative judgement, and concerns about academic consequences were the major barriers to declaring GenAI use.

Table 8

Relationship between students' awareness of generative AI disclosure and their attitudes toward declaring its use in academic writing

Awareness Group	Awareness Pooled Group	Attitude Pooled Group
Pearson Correlation	1	.435**
Sig. (2-tailed)		.000
N	240	240
Attitude Group	Pearson Correlation	.435**
	Sig. (2-tailed)	.000
	N	240

** . Correlation is significant at the 0.01 level (2-tailed).

Table 8 demonstrates a moderate, positive, and statistically significant relationship between students' awareness of GenAI disclosure and their attitudes toward declaring its use in academic writing ($r = .435$, $p < .001$, $N = 240$). This means that higher awareness of GenAI disclosure was associated with more favourable attitudes toward declaration. Since the probability value was below the 0.05 significance level, the null hypothesis was rejected. The finding therefore establishes a significant association between students' awareness of GenAI disclosure and their attitudes toward declaring GenAI use.

Table 9

Descriptive Statistics of Students' Attitudes by Disciplinary Cluster

Disciplinary cluster	N	Mean	Standard deviation
Science and Technology	159	2.91	0.59
Health and Medical Sciences	21	2.82	0.45
Social and Management Sciences	40	2.73	0.57
Arts and Professional Studies	20	2.99	0.56
Total	240		

Table 9 presents the descriptive statistics of undergraduate students' attitudes toward declaring GenAI use across the disciplinary clusters. Arts and Professional Studies recorded the highest mean attitude score ($M = 2.99$, $SD = 0.56$), followed by Science and Technology ($M = 2.91$, $SD = 0.59$) and Health and Medical Sciences ($M = 2.82$, $SD = 0.45$). Social and Management Sciences recorded the lowest mean attitude score ($M = 2.73$, $SD = 0.57$). Although the mean scores varied across the clusters, Welch's one-way ANOVA was conducted to determine whether the observed differences were statistically significant.

Table 10
Welch's One-Way ANOVA of Students' Attitudes Across
Disciplinary Clusters

Source	Welch's F	df1	df2	p value
Disciplinary cluster	1.385	3	49.81	.258

Table 10 presents the result of Welch's one-way ANOVA conducted to determine whether undergraduate students' attitudes toward declaring GenAI use differed significantly across disciplinary clusters. The result showed that the differences were not statistically significant, Welch's $F(3, 49.81) = 1.385$, $p = .258$. Since the p value was greater than the 0.05 level of significance, the null hypothesis was retained. This means that undergraduate students' attitudes toward declaring GenAI use in academic writing did not differ significantly across the disciplinary clusters.

Discussion

The study found that undergraduate students' use of generative artificial intelligence tools was concentrated mainly on ChatGPT, Meta AI, and Google Gemini. ChatGPT's dominance may be attributed to its accessibility, conversational interface, and ability to support brainstorming, summarisation, explanation, editing, and drafting within a single platform. This finding agrees with previous studies that identified ChatGPT as a widely used academic support tool among university students (Ngo, 2023; Montenegro-Rueda et al., 2023; Levine et al., 2025). It also supports the view that students are more likely to adopt GenAI tools they perceive as useful, accessible, and capable of reducing the time and effort required for academic tasks (Shahzad et al., 2024; Strzelecki, 2024).

The limited use of specialised GenAI platforms indicates that increased access to GenAI has not necessarily resulted in diversified use among Nigerian undergraduates. This finding only partially agrees with studies showing the growing application of multimodal GenAI tools in research, writing, visual design, and multimedia production (Baidoo-Anu et al., 2024; Johnston et al., 2024; Civit et al., 2024; Yan, 2024). The limited use of these tools may be associated with inadequate awareness, subscription costs, disciplinary relevance, digital competence, and students' greater familiarity with general-purpose platforms. This supports the argument that GenAI use varies according to students' technological experience, discipline, access to digital resources, and the nature of their academic tasks (Kelly et al., 2023; Abdaljaleel et al., 2024).

The students demonstrated a generally high awareness of GenAI disclosure. They understood the meaning of disclosure, recognised relevant academic integrity expectations, and were largely able to differentiate acceptable from unacceptable GenAI use. This finding agrees with the position that disclosure promotes transparency by identifying the tool used, its purpose, and the extent of its contribution to academic work (El Ali et al., 2024; Heywood & Armstrong, 2024). It also reflects the growing ethical awareness of artificial intelligence among Nigerian university students (Ono et al., 2025). However, students were comparatively less certain about whether nondisclosure constituted academic

misconduct and the consequences of failing to acknowledge GenAI assistance. This supports the argument that familiarity with GenAI does not automatically produce a complete understanding of disclosure obligations and academic consequences (Kelly et al., 2023; Siraj & Duke, 2025; Rismanchian et al., 2026).

The students' attitudes toward declaring GenAI use were generally favourable but contained some contradictions. They recognised that disclosure promotes accountability and academic honesty, does not necessarily reduce the originality of their work, and should become part of academic writing standards. This agrees with studies indicating that students may view disclosure as a responsible practice that clarifies authorship and demonstrates academic integrity (Chan & Hu, 2023; Heywood & Armstrong, 2024). Nevertheless, many students were inclined to disclose only when directly asked and expressed concerns about punishment, copyright, and intellectual property. This suggests that accepting disclosure as an ethical principle does not always lead to voluntary disclosure. The finding agrees with the literature showing that students may support transparency while withholding disclosure because of anticipated accusations, stigma, or unfavourable academic consequences (Vetter et al., 2025; Du & He, 2026; Kirsanov et al., 2026; Qu & Wang, 2026).

The major challenges affecting disclosure were unclear university policies, inconsistent interpretations of GenAI use among lecturers, fear of accusation, concern about lower grades, stigma, embarrassment, disciplinary action, and inadequate knowledge of disclosure procedures. This finding agrees with studies that identified policy ambiguity and inconsistent academic expectations as major obstacles to responsible GenAI use (Bearman et al., 2023; El Ali et al., 2024). Policies may be ineffective when they prohibit unauthorised AI use without explaining what constitutes acceptable assistance, when disclosure is required, and how it should be presented. The fear-related challenges also support the view that students may conceal GenAI use when they perceive disclosure as carrying greater personal and academic risks than nondisclosure (Vetter et al., 2025; Du & He, 2026; Kirsanov et al., 2026).

The finding that some students did not know how to declare GenAI assistance further indicates that nondisclosure should not always be interpreted as deliberate misconduct. It may result from inadequate guidance, uncertainty about the level of AI contribution that requires acknowledgement, and confusion about the difference between minor writing assistance and substantial content generation. This agrees with the literature showing that students often struggle to determine whether activities such as brainstorming, grammar correction, paraphrasing, summarisation, and drafting require disclosure (El Ali et al., 2024; Rismanchian et al., 2026). Universities must therefore distinguish between different forms and levels of GenAI assistance when developing disclosure guidelines.

Importantly, the finding revealed that greater awareness of GenAI disclosure was associated with more favourable attitudes toward declaring its use. Students who understood disclosure requirements, academic integrity expectations, and acceptable GenAI practices were more likely to view declaration positively. This agrees with studies indicating that ethical awareness can influence students' perceptions and responsible use of artificial intelligence (Simon et al., 2024; Ono et al., 2025; Zhu et al., 2025). The

finding implies that improved awareness can clarify the purpose of disclosure, reduce uncertainty, and encourage students to view declaration as responsible academic practice rather than an admission of wrongdoing. This finding is consistent with the Theory of Planned Behaviour, which explains that behavioural intention is influenced by attitude, subjective norms, and perceived behavioural control (Ajzen, 1991). Students who understand the value of GenAI disclosure are more likely to develop favourable attitudes toward it. University policies, lecturer expectations, and peer reactions represent subjective norms that can encourage or discourage disclosure. Similarly, knowing when and how to declare GenAI assistance strengthens perceived behavioural control. Unclear policies, inconsistent lecturer expectations, fear of punishment, and stigma may weaken students' intention to disclose, even when they understand its ethical importance. This interpretation is consistent with previous applications of the theory to students' information practices and technology-related intentions (Joo et al., 2019; Luo et al., 2021; Rahmat et al., 2022; Matthews & Johnson, 2023).

Finally, students' attitudes toward declaring GenAI use did not differ meaningfully across disciplinary clusters. This finding disagrees with the expectation that differences in disciplinary conventions, assessment practices, digital competence, and technology use would produce substantially different attitudes. Although GenAI experience and patterns of use may differ across disciplines, such differences do not necessarily result in different attitudes toward disclosure (Kelly et al., 2023; Abdaljaleel et al., 2024). From the perspective of the Theory of Planned Behaviour, the similarity may be explained by students' exposure to common institutional expectations, lecturer authority, academic integrity principles, and concerns about academic penalties. Overall, the findings show that Nigerian undergraduates generally recognise the ethical value of GenAI disclosure, but clear policies, consistent lecturer guidance, supportive academic norms, and practical disclosure procedures are required to translate this awareness into regular disclosure behaviour.

Conclusion

The study concludes that undergraduate students in Nigerian universities use generative artificial intelligence for academic writing, although their use is concentrated mainly on ChatGPT, Meta AI, and Google Gemini. Students generally understand GenAI disclosure and recognise its importance for academic honesty, accountability, and originality. However, their willingness to declare GenAI use is constrained by unclear university policies, inconsistent lecturer expectations, fear of accusation or punishment, possible effects on grades, stigma, and uncertainty about proper disclosure procedures. Greater disclosure awareness is associated with more favourable attitudes, while students' attitudes are generally similar across disciplinary clusters. Consistent with the Theory of Planned Behaviour, GenAI disclosure depends not only on students' attitudes but also on institutional expectations and their confidence in knowing when and how to disclose. Therefore, clear policies, consistent guidance, and supportive disclosure procedures are essential for promoting transparent and responsible GenAI use in Nigerian universities. Based on the findings and conclusion of this study, the following recommendations have been made:

1. University management should develop and implement clear institution-wide policies that specify acceptable and unacceptable GenAI use, the level of assistance requiring disclosure, and the consequences of nondisclosure.
2. Lecturers should provide consistent instructions on GenAI use and disclosure for assignments, seminar papers, projects, and other academic tasks to prevent conflicting interpretations across courses and disciplines.
3. University libraries and academic integrity units should organise regular GenAI literacy programmes that teach students how to evaluate AI-generated content, distinguish different levels of AI assistance, and disclose GenAI use appropriately.
4. Faculties and departments should introduce standard disclosure statements or templates that enable students to identify the GenAI tool used, its purpose, and the extent of its contribution to their academic work.
5. University management and lecturers should adopt supportive and fair procedures for assessing disclosed GenAI use so that students are not automatically stigmatised, accused of misconduct, or unfairly penalised for transparently declaring permitted AI assistance.

Implications for Policy and Practice

The policy implication of the findings is that Nigerian universities need clear and harmonised frameworks for GenAI use and disclosure in academic writing. These policies should define acceptable and unacceptable applications of GenAI, distinguish minor writing support from substantial content generation, specify when disclosure is required, and provide standard formats for acknowledging AI assistance. Since students' attitudes did not differ significantly across disciplinary clusters, universities may establish institution-wide disclosure principles while allowing faculties and departments to provide additional guidance appropriate to their disciplinary writing and assessment practices. Policies should also protect students who honestly disclose permitted GenAI use from unfair accusation, stigma, or automatic punishment.

The practical implication is that GenAI disclosure policies must be supported by consistent guidance, education, and implementation. Lecturers should clearly explain disclosure expectations for assignments, seminar papers, projects, and other academic tasks and assess declared GenAI use according to the permitted level of assistance. University libraries, academic integrity units, faculties, and lecturers should jointly integrate GenAI literacy and disclosure training into student orientation, information literacy instruction, and academic writing programmes. Such training should teach students when, why, and how to disclose GenAI assistance, verify AI-generated outputs, and retain responsibility for their academic work. This would reduce uncertainty and fear while translating students' awareness and favourable attitudes into consistent disclosure practices.

Limitations of the Study

This study was limited by its cross-sectional survey design, which captured students' awareness, attitudes, and experiences at a single point in time and could not establish causal relationships among

the variables. The use of purposive and convenience sampling also limits the generalisability of the findings to all undergraduate students in Nigerian universities. Although universities from the six geopolitical zones were represented, respondents were disproportionately drawn from federal universities, the South-South zone, and computing-related disciplines. In addition, the study relied on self-reported responses, which may have been influenced by social desirability, inaccurate recall, or students' reluctance to disclose their actual GenAI practices. The study examined attitudes and intentions rather than directly observing disclosure behaviour. Finally, the rapid development of GenAI tools and institutional policies means that students' usage patterns and disclosure experiences may change over time.

Suggestions for Further Studies

Further studies should employ probability sampling and larger samples that provide more balanced representation across university types, geopolitical zones, disciplines, and academic levels. Longitudinal research should examine how students' awareness, attitudes, and disclosure practices change as universities introduce GenAI policies and literacy programmes. Qualitative studies involving interviews or focus groups could provide deeper insight into why students disclose or conceal GenAI use and how they interpret lecturers' expectations. Future researchers should also examine actual disclosure behaviour through assignment reviews or experimental designs rather than relying exclusively on self-reported intentions. Studies may further investigate the influence of institutional policies, lecturer attitudes, peer expectations, perceived behavioural control, and different levels of GenAI assistance on students' willingness to disclose its use.

Declarations

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Conflict of Interest:

The authors declare that there is no conflict of interest regarding this study.

Data Availability:

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Author Contributions:

All authors contributed to the study's conception and design, data collection, analysis and interpretation. They participated in drafting and revising the manuscript, approved the final version, and accepted responsibility for the work.

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Declaration of Generative AI Use

Grammarly AI was used solely for language editing and improving the clarity of the manuscript. The authors critically reviewed and approved the final manuscript and accepted full responsibility for its accuracy, originality, and content.

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