

USE OF GENERATIVE AI ON INFORMATION EVALUATION SKILLS AMONG UNDERGRADUATE STUDENTS IN SELECTED UNIVERSITIES IN SOUTH-EAST NIGERIA

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Abstract

This study investigated the use of generative AI on information evaluation skills among undergraduates students in selected universities in south-east Nigeria. The research specifically assessed usage patterns of generative AI tools, the extent to which students verify the accuracy and reliability of AI-generated information, the level of trust placed in AI outputs compared to traditional scholarly sources, and the availability of formal institutional guidance on AI literacy. Adopting a descriptive survey research design, the study targeted 421 final-year students from the Department of Library and Information Science at Michael Okpara University of Agriculture, Umuahia, and the Department of Computer Science Education at Madonna University, Nigeria. A sample of 205 students was selected using the Taro Yamane formula. Data were collected through a structured

Likert-scale questionnaire and analysed using IBM SPSS Statistics with mean scores and standard deviation. The findings revealed moderate usage of generative AI tools such as ChatGPT and Gemini, primarily for assignments and research support, especially under time pressure. However, students demonstrated critically low levels of verification practices, rarely cross-checking facts, references, or claims against credible sources. The study also found moderate trust in AI-generated content, often influenced by its professional presentation, alongside a significant gap in formal institutional training, with most students being entirely self-taught. Overall, the results highlight the need for urgent integration of AI literacy programmes in Nigerian universities to strengthen critical evaluation skills in the generative AI era.

Keywords: Generative AI, Information Evaluation Skills, AI Literacy, Automation Bias, Algorithmic Hallucinations, Institutional Guidance, Academic Integrity, Digital Literacy

Introduction

The rapid emergence of Generative AI has catalyzed a paradigm shift in the global educational landscape, fundamentally altering how information is created, accessed, and synthesized. This is evident as tools such as ChatGPT, Claude, Gemini, and Grok have transitioned from novelties to essential academic assistants, offering undergraduates unprecedented capabilities in personalized learning and complex problem-solving. However, this "AI revolution" has simultaneously complicated the traditional pillars of information science, particularly the critical competency of information evaluation. As AI systems become increasingly proficient at generating coherent but occasionally "hallucinated" or biased content, the ability of students to discern the accuracy, authority, and reliability of digital information should constitute some concern for educators worldwide (Mudenda, 2026).

In all developing nations, and specifically within Nigeria, the adoption and use of GenAI amongst students of higher instructions presents a unique intersection of opportunity and systemic challenge. Globally, undergraduates are increasingly turning to AI-powered tools to navigate rigorous academic demands, yet this adoption occurs within a context often characterized by infrastructural deficits in Nigeria such as including inconsistent internet connectivity and limited formal digital literacy training. There are numerous evidence including suggestions made by Quadir (2026) that while Nigerian students exhibit moderate awareness of AI tools, they demonstrate a limited capacity in evaluating the credibility of AI-generated outputs. This creates a precarious academic environment where the efficiency of AI may inadvertently erode the critical thinking skills necessary to navigate an increasingly automated information ecosystem.

Despite the growing body of international literature on AI in education, there remains a significant research gap regarding the long-term impact of GenAI on the specific information evaluation heuristics of Nigerian undergraduates. Most existing studies in the region have focused on broad adoption rates or ethical concerns like plagiarism, leaving the cognitive and methodological shifts in how students verify information largely unexplored. This study seeks to address this gap by empirically investigating how frequent GenAI usage influences the information evaluation skills of undergraduates across selected Nigerian universities. By examining the relationship

between AI reliance and evaluative rigor, this research aims to provide actionable insights for curriculum designers and policymakers striving to foster a "human-centered" approach to AI integration in the Nigerian academic sector (UNESCO, 2025).

Statement of the Problem

In an ideal academic environment, university education equips undergraduates with robust information literacy skills, enabling them to critically evaluate the authority, accuracy, and objectivity of information before it is consumed or disseminated. With the proliferation of the use of Artificial Intelligence in higher education, it is expected that these evaluative heuristics would evolve to match the complexity of AI-generated content, ensuring that Nigerian undergraduates remain discerning users of technology rather than passive consumers of automated data. However, the rapid and unregulated adoption of Generative AI tools among Nigerian undergraduates has created a significant disconnect between technological utility and cognitive verification. It is observable that majority of students in Nigerian universities are increasingly relying on AI platforms like ChatGPT and Gemini for academic inquiries, assignments, and research synthesis without possessing the requisite skills to detect algorithmic hallucinations which are plausible-sounding but factually incorrect information. This reliance is exacerbated by a prevailing "automation bias," where students tend to favor AI-generated outputs over traditional, peer-reviewed sources due to the speed and conversational ease of GenAI. Again, the

absence of comprehensive AI-integrated curricula in many national universities means that students are often self-taught in the use of these tools, lacking formal guidance on the ethical and technical nuances of AI verification. This lack of institutional framework, combined with the pressure of academic workloads and limited access to high-cost premium databases, creates a vulnerability where students may inadvertently propagate misinformation or develop an intellectual dependency on artificial intelligence.

If this trend continues, there is a looming risk of a decline in the quality of academic scholarship and critical thinking within the Nigerian university system. The long-term consequence could be the production of graduates who lack the analytical rigor required to navigate a global information economy increasingly plagued by "deepfakes" and AI-driven disinformation. Therefore, there is an urgent need to empirically investigate the impact of Generative AI on the information evaluation skills of Nigerian undergraduates to determine the extent of this skill gap and provide a basis for pedagogical intervention.

Research Questions

The following research questions guided the study

- i. What are the usage patterns of generative AI tools for information evaluation among undergraduates in Nigerian universities?

- ii. To what extent do Nigerian undergraduates verify the accuracy and reliability of information obtained from generative AI platforms?
- iii. What level of trust do Nigerian undergraduates place in AI-generated information compared to traditional scholarly sources?
- iv. What is the extent of formal information literacy training or institutional guidance provided by Nigerian universities to assist students in navigating generative AI tools?

Literature Review

The rapid emergence of Generative Artificial Intelligence (GenAI) has catalysed a paradigm shift in the global educational landscape, fundamentally altering how information is created, accessed, and synthesized. Tools such as ChatGPT, Claude, Gemini, and Grok have transitioned from novelties to essential academic assistants, offering undergraduates unprecedented capabilities in personalized learning and complex problem-solving (Benaich, 2025). However, this "AI revolution" has simultaneously complicated the traditional pillars of information science, particularly the critical competency of information evaluation. As AI systems become increasingly proficient at generating coherent but occasionally "hallucinated" or biased content, the ability of students to discern the accuracy, authority, and reliability of digital information should constitute some concern for educators worldwide (Mudenda, 2026; Zhai et al., 2024).

In all developing nations, and specifically within Nigeria, the adoption and use of GenAI amongst students of higher institutions presents a unique intersection of

opportunity and systemic challenge. Globally, undergraduates are increasingly turning to AI-powered tools to navigate rigorous academic demands, yet this adoption occurs within a context often characterized by infrastructural deficits in Nigeria, including inconsistent internet connectivity and limited formal digital literacy training (Olowookere et al., 2023; Yusuf et al., 2025). Recent empirical evidence suggests that while Nigerian students exhibit moderate awareness of AI tools, they demonstrate a "limited capacity" in evaluating the credibility of AI-generated outputs (J. & Quadir, 2026). This creates a precarious academic environment where the efficiency of AI may inadvertently erode the critical thinking skills necessary to navigate an increasingly automated information ecosystem.

Usage Patterns of Generative AI Among Undergraduates

The baseline adoption of GenAI tools among university undergraduates globally and regionally reflects a transition from sporadic, novel experimentation to structural, daily reliance. Driven by intense academic workloads, time constraints, and the conversational ease of large language models (LLMs), students increasingly employ GenAI as an ambient cognitive environment (Meakin, 2024). Undergraduates systematically incorporate GenAI at every phase of the research cycle—including topic brainstorming, complex problem-solving, and the summarization of lengthy scholarly literature.

Rather than utilizing AI purely for basic drafting, this reliance frequently initiates an inversion of the traditional learning sequence; students' default to generation before comprehension, and acceptance before verification. Within the Sub-Saharan African and Nigerian contexts, these usage patterns are heavily modified by structural realities. While students express immense readiness and motivation to utilize these tools for academic relief, their actual usage patterns are frequently disrupted by environmental constraints, including high data costs, frequent power interruptions, and limited formal digital literacy training (Olowookere et al., 2023; Yusuf et al., 2025). Consequently, when students do gain access, they often prioritize maximum output and speed, heavily encouraging cognitive offloading over prolonged engagement or verification of the source material.

Verification Heuristics and Algorithmic Hallucinations

A critical threat introduced by unregulated GenAI adoption is the phenomenon of algorithmic hallucinations—instances where LLMs produce highly articulate, syntactically flawless information that is completely devoid of factual truth. The capacity of undergraduates to detect these anomalies depends entirely on their active verification heuristics, which current studies show are severely lacking among self-taught users (Dabran-Zivan, 2025).

Historically, university information literacy frameworks have relied on rigid, checklist-style evaluation methodologies. The table below contrasts these traditional frameworks with the evolving demands of an AI-driven ecosystem:

Table 1: Comparison of Information Evaluation Frameworks

Evaluation Framework	Core Methodology	Practical Constraints in the GenAI Era
Traditional Checklist Approaches <i>(e.g., CRAAP Test)</i>	Evaluates Currency, Relevance, Authority, Accuracy, and Purpose via a structural, binary checklist (Chernbumroong, 2025).	Fails against AI. GenAI blurs the boundaries between expert and non-expert sources. It produces outputs with impeccable surface quality and fabricated citations that easily bypass traditional checklist criteria (Dabran-Zivan, 2025; Reagan et al., 2025).
Lateral Reading Frameworks <i>(e.g., SIFT Method)</i>	Promotes checking the ecosystem: Stop, Investigate the source, Find trusted coverage, and Trace claims back to the original context (Reagan et al., 2025).	High Verification Burden. Requires deep cognitive endurance. Undergraduates frequently lack the patience, prompt-refinement skills, or domain expertise required to cross-reference AI claims against trusted scholarly databases (Reagan et al., 2025; Zhou, 2026).

Because AI systems excel at mimicking the stylistic markers of authority, human evaluators struggle to differentiate between authentic human text and AI-generated outputs on surface value alone (Dabran-Zivan, 2025). This stylistic fluency masks deep underlying flaws, such as subtle contextual misrepresentations and systemic algorithmic

biases, which students almost completely fail to audit or correct due to a lack of formal training (Dabran-Zivan, 2025; J. & Quadir, 2026).

Trust Dynamics and Automation Bias

The cognitive vulnerability of undergraduates is deeply exacerbated by a psychological phenomenon known as automation bias—the systemic tendency for human operators to favour automated, computer-generated suggestions over non-automated information, even when the automated system is demonstrably incorrect (Mmari, 2025). In academic settings, this manifests as an uncritical trust in GenAI outputs (J. & Quadir, 2026). Because platforms deliver immediate, highly structured, and confident answers, they neutralize the healthy scepticism that students typically bring to unverified web links or standard search engine results (Dabran-Zivan, 2025).

When working with AI assistance, students frequently accept flawed drafts with minimal critical engagement or structural modification. As Mmari (2025) correctly pointed out that a high confidence in an AI's output is directly linked to lower verification and reflection. Over time, this misplaced trust erodes cognitive endurance. When students shift their view of knowledge from an internal store of verified facts to a passive baseline where they blindly accept external machine outputs, their long-term ability to engage in independent, rigorous academic scholarship is severely compromised.

Institutional Guidance and Frameworks in Higher Education

Higher education institutions (HEIs) globally are grappling with the governance of GenAI, transitioning from initial, reactionary bans to structured, integration-focused frameworks (UNESCO, 2025). However, a profound disconnect exists between student usage and institutional policy execution, particularly within developing nations (Mudenda, 2026).

- **The Policy Gap:** Empirical modelling of student behaviour in regional universities indicates that traditional institutional support mechanisms and generic ethical declarations do not significantly influence a student's intention to use GenAI (Mmari, 2025). Students maintain an incredibly high readiness to use tools like ChatGPT regardless of whether their university has explicit rules or permissions in place, meaning standard passive policymaking fails to shape actual day-to-day student behaviour.
- **Curricular Inequities:** While global guidelines emphasize embedding advanced digital literacy directly into university curricula, Nigerian universities continue to navigate deep systemic obstacles. Overpopulated classrooms, outdated pedagogical frameworks, and an absolute scarcity of robust campus IT infrastructure make it

incredibly difficult to implement structured, monitored AI training (Olowookere et al., 2023).

- **The Path Forward:** To counteract intellectual dependency and prevent the uncontrolled spread of misinformation, educational systems must pivot toward verification-oriented learning (Zhou, 2026). This framework shifts the focus of the classroom away from grading the final written product. Instead, it places the primary educational value on evaluating the student's active verification process, teaching them to construct rigorous chains of accountability, refine prompts critically, and systematically audit algorithmic outputs (Li, 2025; Zhou, 2026).

Research methodology

The study adopted a descriptive survey research design. The design aims to systematically obtain data on The Impact of Generative AI on Information Evaluation Skills Among Nigerian Undergraduates. The population of the study is 421 final year students of the department of Library and Information Science, Michael Okpara University, Umuahia and the department of Computer Science Education, Madonna University Nigeria. Taro Yamani sampling formula was employed to get a sample of 205 students. To elicit responses from the respondents, a structured questionnaire instrument containing 15 items statements on a Likert scale was used. The instrument

was face validated by 3 experts after which, it was subjected to reliability test. The internal consistency of the instrument was ascertained through Cronbach Alpha technique that yielded a co-efficient of 0.88 which was considered high enough for the study. The response level of the respondent was 100%. The data collected for the study was analysed using IBM SPSS Statistics 27. Mean scores was used to determine the level of acceptance or rejection of the item statements while Standard Deviation was used to determine the closeness or otherwise of the responses from the Mean. In decision making, any item statement with a mean value greater than or equal to cut-off mark of 2.50 was considered as accepted by the respondents while any item statement with mean value lower than cut-off mark of 2.50 was considered to be rejected by the respondents.

Results

Research Question 1: What are the usage patterns of generative AI tools for information evaluation among undergraduates in Nigerian universities?

S/N	Items	$\bar{x}$	SD
1	I use generative AI platforms (e.g., ChatGPT, Gemini) on often to assist with my academic assignments and research inquiries.	3.95	0.62
2	I rely heavily on generative AI tools to summarize complex academic textbook chapters and journal articles.	2.71	1.00
3	I frequently use generative AI tools to brainstorm research topics or generate outlines for my class projects.	2.99	1.87
4	I prefer using generative AI tools as my very first step when looking for information, rather than using traditional search engines like Google.	3.09	1.91

5	I shift to using generative AI more frequently when I am under strict academic deadlines or facing high workloads.	2.91	1.34
Grand		3.13	1.35

The findings on usage patterns reveal a moderate overall engagement with generative AI tools among Nigerian undergraduates, with a grand mean of 3.13. Students reported relatively frequent use of platforms like ChatGPT and Gemini to assist with academic assignments and research inquiries, as indicated by the high mean score of 3.95. However, reliance on these tools for more intensive tasks such as summarizing complex textbook chapters and journal articles was lower at 2.71. Similarly, the use of AI for brainstorming research topics or generating project outlines (mean = 2.99) and preferring AI over traditional search engines as a first step (mean = 3.09) showed only moderate adoption. Students also indicated a slight tendency to increase AI usage under tight deadlines or high workloads (mean = 2.91). Overall, while AI is integrated into academic routines, its application remains selective rather than dominant across different tasks

Research Question 2: To what extent do Nigerian undergraduates verify the accuracy and reliability of information obtained from generative AI platforms?

S/N	Items	$\bar{x}$	SD
1	I systematically double-check the facts generated by AI against external library databases or textbooks before using them in my work.	1.51	0.83

2	I actively verify whether the references and citations provided by generative AI tools actually exist.	1.11	0.72
3	I systematically cross-reference individual claims made by AI tools with alternative internet sources or peer-reviewed journals.	2.10	1.11
4	I carefully read through AI-generated outputs specifically looking out for logical inconsistencies or hidden biases.	2.72	1.01
5	I accept the initial output provided by generative AI tools without executing further manual search strategies to test its accuracy.	1.86	0.63
Grand		1.84	0.86

Data for this research question indicate a generally low level of verification practices among the undergraduates, reflected in the low grand mean of 1.84. Students rarely systematically double-check AI-generated facts against library databases or textbooks (mean = 1.51) or verify the existence of references and citations provided by AI tools (mean = 1.11). Cross-referencing individual claims with alternative sources or peer-reviewed journals was also limited (mean = 2.10). While there was slightly higher attention to reading outputs for logical inconsistencies or biases (mean = 2.72), many students admitted to accepting initial AI outputs without further manual verification (mean = 1.86). This suggests a concerning gap in critical evaluation behaviors when interacting with generative AI content.

Research Question 3: What level of trust do Nigerian undergraduates place in AI-generated information compared to traditional scholarly sources?

S/N	Items	$\bar{x}$	SD
1	I consider information produced by generative AI to be just as authoritative and credible as peer-reviewed journal articles.	3.13	0.52
2	I feel confident that generative AI platforms provide objective information that is completely free from algorithmic biases.	3.99	0.71
3	I naturally trust the accuracy of text generated by an AI tool simply because it writes in a highly professional and articulate manner.	2.56	1.13
4	I trust answers provided directly by generative AI tools more than the recommendations found in physical university library materials.	1.87	1.07
5	I find myself favoring automated AI outputs over traditional academic search processes because of their speed and conversational ease.	2.31	0.39
Grand		2.77	0.76

The results show a moderate level of trust in generative AI information compared to traditional scholarly sources, with a grand mean of 2.77. Undergraduates expressed some agreement that AI-produced information is as authoritative as peer-reviewed articles (mean = 3.13) and displayed relatively high confidence in the objectivity of AI platforms, believing them to be free from algorithmic biases (mean = 3.99). Trust based on the professional and articulate presentation of AI-generated text was moderate (mean = 2.56). However, students placed notably lower trust in AI outputs compared to physical university library materials (mean = 1.87) and only moderately favored AI over traditional search processes due to convenience (mean = 2.31). This indicates a mixed but somewhat elevated trust profile that could influence information evaluation practices.

Research Question 4: What is the extent of formal information literacy training or institutional guidance provided by Nigerian universities to assist students in navigating generative AI tools?

S/N	Items	$\bar{x}$	SD
4.1	My university provides regular workshops or formal courses that explicitly teach how to critically evaluate AI-generated content.	1.05	0.89
4.2	There are clear institutional guidelines and policies in my department regarding the ethical boundaries of using generative AI for assignments.	1.22	0.99
4.3	My lecturers provide specific guidance on how to spot and avoid "hallucinations" or false data generated by AI platforms.	2.06	1.17
4.4	The university library offers clear training resources on how to appropriately cite and reference generative AI tools in academic research.	2.32	0.43
4.5	I am entirely self-taught regarding how to evaluate, verify, and responsibly use generative AI platforms for my academic coursework.	3.97	0.57
Grand		2.12	0.81

Findings on institutional support reveal limited formal training and guidance, as evidenced by the low grand mean of 2.12. Students strongly disagreed that their universities provide regular workshops or courses on critically evaluating AI-generated content (mean = 1.05) and reported minimal availability of clear institutional guidelines on ethical AI use (mean = 1.22). Guidance from lecturers on identifying AI hallucinations was also low (mean = 2.06), though library resources for citing AI tools received slightly higher acknowledgment (mean = 2.32). A notably high mean of 3.97 for being entirely self-taught highlights that most students rely on personal initiative rather than

structured institutional support when learning to evaluate and use generative AI responsibly. This points to a significant shortfall in university-level preparedness for the AI era.

Recommendations

1. There is a need for Nigerian universities should explicitly integrate comprehensive AI literacy programs directly into their core curricula to move students away from being entirely self-taught.
2. Curriculum designers should adopt verification-oriented learning models that reward the critical thinking and auditing processes behind a student's work rather than grading the final AI-generated product alone.
3. Higher education institutions must establish and publicize clear, formal departmental guidelines regarding the ethical boundaries and proper usage of generative AI for academic assignments.
4. University libraries and academic departments should organize regular workshops and training sessions focused on practical verification strategies and hallucination detection.

5. Academic institutions must invest in improving campus IT infrastructure and expanding student access to premium research databases to reduce reliance on unverified generative AI outputs due to resource constraints.

Conclusion

This study examined the impact of generative AI on information evaluation skills among Nigerian undergraduates and revealed a pattern of moderate adoption coupled with significant deficiencies in critical engagement. While students frequently utilize tools like ChatGPT and Gemini for academic assistance, particularly under time pressure, they exhibit low levels of verification, moderate but potentially misplaced trust in AI outputs, and heavy reliance on self-taught approaches due to inadequate institutional guidance. These findings underscore a growing risk of automation bias and weakened critical thinking abilities in the absence of structured support.

To address this gap, Nigerian universities must urgently integrate comprehensive AI literacy programs into curricula, including practical training on verification strategies, hallucination detection, and ethical AI use. Lecturers and libraries should play a more proactive role in equipping students with the necessary skills to balance technological convenience with intellectual rigor. Ultimately, without deliberate pedagogical intervention, the unchecked integration of generative AI may undermine the quality of

academic scholarship and produce graduates ill-prepared for an information landscape dominated by artificial intelligence. Future research should explore longitudinal effects and the effectiveness of targeted interventions in strengthening information evaluation competencies in similar developing contexts.

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