

Original Research Article

Generative AI and Smart Learning Devices in Accounting Education: Enhancing Knowledge Acquisition Among Students in Ghanaian Private Universities

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Abstract: Purpose – This study aims to examine the comprehensive role of generative artificial intelligence (AI) tools and smart learning devices in enhancing knowledge acquisition among accounting students in Ghanaian private universities, as well as the impact of perceived usefulness, perceived ease of use, and institutional support on students' AI adoption behaviour in accounting education. Design/methodology/approach – Anchored by the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), this study employs a qualitative research design using in-depth interviews with accounting students purposively selected from four private universities in Ghana. Thematic analysis was used to analyse the data gathered, using UTAUT's four constructs, performance expectancy, effort expectancy, social influence, and facilitating conditions, as sensitising concepts. Findings – The study reveals that generative AI tools, particularly ChatGPT and smart learning devices, positively enhance accounting students' knowledge acquisition in Ghanaian private universities. Perceived usefulness and ease of use emerged as the dominant drivers of AI adoption, while institutional support and digital literacy moderated how effectively students integrated these tools into their learning. Ethical concerns, over-reliance, and uneven access to devices remain significant challenges. Research limitations/implications – This study focuses exclusively on private universities in Ghana and therefore limits the generalisability of findings. Future research should extend to public universities and across African contexts. Practical implications – The findings encourage Ghanaian private universities to invest in AI-driven pedagogical infrastructure, develop institutional policies governing responsible AI usage, and build the digital competencies of accounting faculty and students to maximise the educational benefits of generative AI. Originality/value – This paper makes three distinct contributions. Primarily, it demonstrates that UTAUT's four constructs are not static cognitive judgments but are dynamically negotiated through institutional, infrastructural, and ethical contexts in

developing-country higher education settings, thereby extending UTAUT's explanatory scope. Furthermore, it introduces the concept of an institutional legitimacy vacuum to account for how the absence of formal AI governance policies drives covert and unguided student AI use in Ghanaian private universities, a phenomenon that existing UTAUT-based models do not theorise. Finally, it provides the first qualitative, multi-university evidence base on generative AI adoption among accounting students in Ghanaian private higher education, an under-researched context with distinct structural challenges including large class sizes, resource constraints, and infrastructure deficits. Paper type: Research paper

Keywords: Generative AI, Smart Learning Devices, Accounting Education, Knowledge Acquisition, Ghana, Private Universities

1. Introduction

In the modern landscape of higher education, generative artificial intelligence (AI) tools and smart learning devices have emerged as transformative forces in reshaping how students engage with academic content, construct knowledge, and develop professional competencies. In developing countries such as Ghana, where private universities are increasingly competing to deliver quality and innovative education, the integration of AI-powered tools, including ChatGPT, Google Gemini, and AI-embedded learning management systems, into accounting curricula represents both a considerable opportunity and an underexplored area of scholarly inquiry (Gold *et al.*, 2026; Tharapos *et al.*, 2025).

Globally, the monetisation of generative AI technologies has changed the architecture of teaching and learning, particularly in technically oriented disciplines such as accounting, where procedural knowledge, analytical reasoning, and regulatory compliance form the bedrock of professional preparation (Zhou and Luo, 2025; Alahmed, 2025). Tools such as ChatGPT have demonstrated notable capacity to support students in simulating financial scenarios, explaining complex accounting standards, and facilitating formative self-assessment, capabilities that align directly with the pedagogical demands of modern accounting education (Rawashdeh *et al.*, 2026; Fachrurrozie *et al.*, 2025). In Africa, and Ghana in particular, accounting education faces unique structural challenges, including resource constraints, large student-to-lecturer ratios, and limited access to updated instructional materials, which generative AI and smart learning devices are uniquely positioned to address (Wale-Fadairo and Ige, 2025).

Despite the growth and emergence of research on AI in education globally, little is known about the specific experiences of accounting students in Ghanaian private universities in adopting and using generative AI tools and smart learning devices for knowledge acquisition. This gap is particularly striking, given that private universities in Ghana have been at the forefront of technology adoption in higher education, often operating with greater institutional agility than their public counterparts (Boruzie *et al.*,

2025). The limited qualitative exploration of this phenomenon has created extant contextual, knowledge, and evidence gaps in the accounting education literature in Africa.

To fill these gaps, this study is anchored in the Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003), which proposes that technology adoption is driven by four core determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions. UTAUT extends earlier frameworks such as TAM (Davis, 1989) by incorporating the social and institutional dimensions of technology use, making it especially well-suited for exploring AI adoption in complex, resource-constrained educational environments such as private universities in Ghana. The purpose of this study is to establish a comprehensive understanding of how generative AI and smart learning devices shape the knowledge acquisition experiences of accounting students in Ghanaian private universities, with the objective being to examine the role of performance expectancy, effort expectancy, social influence, facilitating conditions, and ethical awareness in shaping students' AI adoption behaviour in accounting learning contexts.

This study contributes to the accounting education and educational technology literature by bridging evidence, context, and knowledge gaps regarding generative AI adoption and accounting students' learning outcomes in private Ghanaian universities. The remainder of the paper is structured as follows. Section 2 reviews the literature on UTAUT, generative AI, smart learning devices, and accounting education. Section 3 presents the research methodology. Section 4 presents the findings, while Section 5 offers cross-cutting discussion and Section 6 presents conclusions, implications, and directions for future research.

2. Theory Development and Literature Review

2.1 Theoretical Framework: From TAM to UTAUT in Accounting Education

This study is anchored in the Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003) as an integrative advancement of earlier technology acceptance models, most notably the Technology Acceptance Model (TAM) (Davis, 1989).

While TAM identifies perceived usefulness (PU) and perceived ease of use (PEOU) as the two principal cognitive determinants of technology adoption, its explanatory power is limited in complex, socially embedded educational settings where adoption behaviour is shaped by more than individual cognition alone. UTAUT addresses this limitation by consolidating eight competing technology acceptance theories into four core determinants: performance expectancy, effort expectancy, social influence, and facilitating conditions. Performance expectancy corresponds closely to TAM's perceived usefulness, capturing the degree to which students believe that using generative AI will enhance their academic performance. Effort expectancy aligns with perceived ease of use, reflecting the perceived ease of engaging with AI tools. Crucially, UTAUT adds two constructs absent from TAM: social influence, which captures the extent to which students perceive that peers, lecturers,

and institutional norms endorse AI adoption; and facilitating conditions, which reflect the degree to which students believe that the organisational and technical infrastructure necessary for AI use is available to them. These two additional constructs are especially pertinent in the Ghanaian private university context, where peer-driven adoption patterns and significant infrastructural constraints have been shown to mediate the relationship between intention and actual use of digital tools (Wale-Fadairo and Ige, 2025).

The adoption of UTAUT as this study's theoretical lens is also motivated by its established applicability in developing-country educational technology contexts. Suresh *et al.* (2025) drew on UTAUT constructs to examine technology readiness in shaping AI adoption in accounting education, finding that students' effort expectancy and social influence from peers and faculty jointly predicted adoption intentions more robustly than effort expectancy alone. Rawashdeh *et al.* (2026) similarly confirmed that performance expectancy and social influence were the dominant predictors of ChatGPT adoption among accounting students, underscoring the importance of social and institutional endorsement in driving uptake. Within the Ghanaian higher education context specifically, facilitating conditions have been consistently identified as a binding constraint on technology adoption, given the prevalence of unreliable internet connectivity and unequal device ownership across student populations (Tabiri *et al.*, 2026). UTAUT's explicit theorisation of facilitating conditions as an adoption determinant therefore makes it a more complete and contextually appropriate framework for this study than TAM alone. This study deploys UTAUT qualitatively, using its four constructs as sensitising concepts to guide the thematic analysis of accounting students' lived experiences with generative AI and smart learning devices in Ghanaian private universities, thereby extending UTAUT's predominantly quantitative application record into the domain of interpretive, context-rich inquiry.

2.2 Generative AI Tools in Accounting Education

Generative AI in accounting education refers to the use of large language model (LLM)-based tools, such as ChatGPT, Gemini, and Claude, to support, augment, and personalise the learning experiences of accounting students (Zhou and Luo, 2025; Tharapos *et al.*, 2025). These tools offer capabilities that are particularly well-aligned with the demands of accounting curricula: they can explain complex regulatory frameworks such as IFRS, simulate audit scenarios, generate practice problems, provide instant feedback on student responses, and assist in the revision of financial statements and disclosures (Alahmed, 2025; Fachrurrozie *et al.*, 2025).

Tharapos *et al.* (2025) evaluated ChatGPT's role in assessment and skill development in accounting education, finding that generative AI has significant potential to support formative assessment while raising important questions about academic integrity. Zhou and Luo (2025) explored the impact of generative AI on student learning in accounting, establishing a positive relationship between AI tool use and conceptual understanding, particularly when students used AI as a dialogic learning partner rather than a mere answer-retrieval tool. In the Ghanaian context, Tabiri *et al.* (2026) examined students' perceptions of AI in learning and found generally positive attitudes, although

concerns about ethical usage and over-dependence were prevalent across Ghanaian higher education institutions.

The adoption of generative AI among accounting students in Ghana is, however, mediated by several factors unique to the local context, including erratic internet connectivity, limited device ownership, and the absence of clear institutional AI policies in most private universities (Wale-Fadairo & Ige, 2025). These contextual realities underscore the importance of qualitative inquiry in capturing the lived experiences of Ghanaian accounting students, something that quantitative surveys alone are ill-equipped to accomplish.

2.3 Smart Learning Devices and Knowledge Acquisition

Smart learning devices, including AI-enabled tablets, smartphones, and laptops integrated with intelligent tutoring systems and e-learning platforms, have become central to the delivery of modern accounting education (Darmawan and Widiastuti, 2025; Ajoy *et al.*, 2022). These devices extend the learning environment beyond the physical classroom, enabling students to access course content, engage with AI tools, and participate in collaborative learning activities at any time and from any location, a capacity that is particularly valuable in the Ghanaian private university context, where contact hours are often constrained by institutional and infrastructural limitations (Boruzie *et al.*, 2025).

Darmawan and Widiastuti (2025) investigated how AI usage and digital literacy interact to shape accounting students' design thinking skills, finding that smart device proficiency significantly amplified the positive effects of AI adoption on higher-order thinking. Ajoy *et al.* (2022) similarly established that accounting student profiles, specifically their familiarity with and access to smart devices, meaningfully influenced their acquisition of AI-related competencies. These findings highlight the critical role of device access and digital infrastructure in enabling generative AI to fulfil its educational promise for accounting students in developing economies.

2.4 Institutional Support, Digital Literacy, and Ethical Considerations

Institutional support is widely recognised as a critical enabler of technology adoption in educational settings (Alsharari and Habashi, 2025; Gold *et al.*, 2026). In Ghanaian private universities, institutional support encompasses the provision of reliable internet infrastructure, the integration of AI literacy into accounting curricula, the formulation of ethical AI use policies, and the professional development of accounting faculty in AI-mediated pedagogy. The absence of robust institutional support structures has been identified as a principal barrier to effective AI adoption in Ghanaian higher education (Boison, 2025).

Digital literacy, defined as the ability to find, evaluate, utilise, share, and create content using digital technologies, is a prerequisite for effective generative AI use in accounting education (Darmawan and Widiastuti, 2025; Rawashdeh *et al.*, 2025). Students with higher levels of digital literacy are better positioned to leverage AI tools strategically for knowledge acquisition, whereas those with limited digital literacy may use AI tools

superficially or in ways that undermine rather than support deep learning. Ethical considerations, including concerns about academic integrity, data privacy, and the risk of AI-generated misinformation in accounting contexts, further complicate the landscape of generative AI adoption among Ghanaian private university students (Tabiri *et al.*, 2026).

3. Research Methodology

3.1 Research Design and Philosophical Orientation

This study adopts a qualitative research design underpinned by an interpretivist philosophical orientation, which seeks to understand the socially constructed meanings that accounting students in Ghanaian private universities attach to their experiences with generative AI tools and smart learning devices (Creswell and Poth, 2018). A qualitative approach is particularly appropriate for this study because the phenomenon under investigation, the experiential, perceptual, and contextual dimensions, the need to generate rich, contextual insights into AI-mediated knowledge acquisition in accounting, is complex, situated, and deeply personal in ways that quantitative instruments cannot fully capture (Saunders et al., 2019; Silverman, 2015; Creswell & Creswell, 2017)

3.2 Researcher Reflexivity

Reflexivity is a hallmark of rigorous qualitative inquiry (Creswell and Poth, 2018). The researcher(s) involved in this study have academic and professional familiarity with accounting education in Ghana and prior exposure to digital learning tools, which may have sensitised data collection to particular themes while potentially underemphasising others. Awareness of this positionality was maintained throughout the research process through regular reflective journaling, peer debriefing with colleagues not involved in the study, and deliberate attention to disconfirming evidence during thematic analysis. Member checking was conducted with eight participants to validate the credibility of preliminary interpretations and to ensure that findings reflected participants' own meanings rather than the researcher's prior assumptions.

3.3 Trustworthiness

The trustworthiness of this qualitative study was established through the four criteria proposed by Lincoln and Guba (1985): credibility, transferability, dependability, and confirmability. Each criterion was addressed through deliberate methodological strategies embedded throughout the research process.

Credibility, which addresses the internal validity of qualitative findings and concerns whether the results accurately represent the experiences of participants (Lincoln and Guba, 1985), was established through three complementary strategies. Firstly, prolonged engagement was maintained across three months of data collection, allowing the researcher to develop deep familiarity with the context of each participating institution and to build trust with participants before and during interviews. Also, member checking was conducted with eight purposively selected participants following the completion of preliminary thematic analysis. Participants were presented with summarised interpretations of the findings relevant to their interviews and invited to verify the accuracy of

transcriptions, challenge misrepresentations, and elaborate on nuances the researcher may have missed. No major disagreements with the preliminary interpretations were raised; minor clarifications provided by three participants were incorporated into the final thematic framework. Finally, peer debriefing was conducted through structured discussions with two academic colleagues who were independent of the study, providing an external check on the consistency and plausibility of emerging themes.

Transferability, which concerns the extent to which findings may be applicable in other contexts, was supported through the provision of thick, contextualised descriptions of the study setting, the institutional characteristics of the four participating universities, participant demographics and academic profiles, and the social and infrastructural conditions shaping AI use in Ghanaian private higher education. Rather than claiming statistical generalisability, the study offers analytical transferability: sufficient contextual richness is provided for readers to judge whether the findings resonate with or illuminate other comparable educational settings in Africa or in developing-country higher education more broadly.

Dependability, which addresses the stability and consistency of findings over time, was maintained through a comprehensive audit trail. This comprised interview audio recordings, verbatim transcripts, NVivo-coded data files, an interview guide, field notes made contemporaneously with each interview, and a reflective research journal in which methodological decisions were recorded throughout the study. These materials collectively document the evolution of analytical reasoning and would enable an independent auditor to trace the full path from raw data to final thematic interpretations.

Confirmability, which concerns the neutrality of findings and the degree to which they reflect participants' experiences rather than researcher bias, was addressed through negative case analysis. Throughout thematic analysis, instances that did not conform to emerging patterns were actively identified and examined rather than set aside. For example, several participants expressed either indifference toward or frustration with generative AI tools, and their accounts were treated as constitutive of the broader picture of adoption rather than as anomalies. The reflective journal and peer debriefing sessions further supported confirmability by providing an ongoing mechanism for surfacing and interrogating the researcher's assumptions.

3.4 Study Context and Participant Selection

The study was conducted in the context of selected Private universities in Ghana, which constitute the research universe. These universities in Ghana have expanded rapidly over the past two decades, driven by the liberalisation of higher education policy, and now account for a significant share of the country's total university enrolment. Accounting programmes are among the most subscribed disciplines in these institutions, reflecting the high occupational demand for accounting professionals in Ghana's growing private sector. Furthermore, the study considered only universities accredited by the Ghana Tertiary Education Commission (GTEC) to ensure compliance with national quality standards. Priority was also given to programmes linked to professional accreditation bodies such as

ACCA, ICAG, and CIMA, ensuring alignment with both academic and professional accounting standards. Finally, geographical representation was considered, with institutions selected across different regions of Ghana to provide a balanced view of the national landscape of accounting education.

Participants were purposively selected from four private universities in Ghana (referred to as BBAU1–BBAU4 for anonymity), institutions that had demonstrably incorporated digital learning tools or AI-related resources into their accounting programmes. Purposive sampling was adopted because it allows the researcher to select information-rich cases most likely to illuminate the research questions (Patton, 2002). A total of 24 in-depth interviews were conducted with accounting students who had used generative AI tools or smart learning devices for academic purposes. Data collection ended after the 24th interview when data saturation was reached, as no new themes or insights emerged from subsequent analysis. Saturation was confirmed through iterative coding and cross-university comparisons, in which recurring patterns indicated that the thematic categories were sufficiently developed (Guest *et al.*, 2006). This assessment was based not only on repetition but also on the depth and diversity of perspectives represented within each theme. To support this, a quote diversity table was developed to show how themes were reflected.

Table 1: Quotes Table of the thematic framework from in-depth interview analysis

Theme	Sub-themes	Representative Participant Quote
1. Perceived Educational Value of Generative AI	AI as a study companion; Conceptual clarification; Exam preparation support	<i>"ChatGPT explains IFRS better than most of my lecturers." (P4)</i>
2. Ease of Use and Smart Device Accessibility	Mobile-first AI access; Interface friendliness; Internet connectivity challenges	<i>"I use my phone to access ChatGPT every day. It is very easy." (P11)</i>
3. Institutional Enablers and Barriers	Faculty AI awareness; Policy gaps; Infrastructure limitations	<i>"Our school has not given us any guidance on how to use AI for studies." (P17)</i>
4. Ethical Concerns and Responsible AI Use	Academic integrity; Over-reliance; AI misinformation in accounting	<i>"I worry that some students just copy AI answers without understanding." (P9)</i>

Source: Field data (2026)

Table 2. Demographic profile of interview participants

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	14	58.3
	Female	10	41.7
Level of Study	Level 200	5	20.8
	Level 300	10	41.7
	Level 400	9	37.5
AI Tool Used	ChatGPT	19	79.2
	Google Gemini	3	12.5
	Other AI tools	2	8.3
Smart Device	Smartphone	17	70.8
	Laptop	6	25.0
	Tablet	1	4.2
Universities	BBAU1	7	30.0
	BBAU2	5	20.0
	BBAU3	7	30.0
	BBAU4	5	20.0

Source: Field data (2026)

3.5 Data Collection

Data were collected through semi-structured, in-depth interviews conducted over a period of three months. An interview guide was developed using the four constructs of UTAUT (Venkatesh et al., 2003) as sensitising concepts: performance expectancy, effort expectancy, social influence, and facilitating conditions. Additional probe areas were drawn from the literature review and included institutional AI governance, digital literacy, academic integrity awareness, and ethical concerns relating to AI use. Each interview lasted between 45 and 75 minutes and was conducted in English, the medium of instruction in Ghanaian universities. Interviews were audio-recorded with the informed consent of participants and subsequently transcribed verbatim.

3.6 Data Analysis

Thematic analysis, following the six-phase framework proposed by Braun and Clarke (2006), was employed to analyse the interview data. The six phases that start with

familiarisation with the data. Interviews were audio-recorded, transcribed verbatim, and analyzed line by line to identify concepts that were later grouped into sub-themes and overarching themes. The analysis involved repeated engagement with interview transcripts and observation notes to enhance familiarity with the data. Initial codes were generated inductively and refined iteratively, focusing on both explicit meanings and underlying assumptions. Attention was also given to tensions, silences, and contradictions within the data, rather than merely identifying recurring words or phrase generation of initial codes.

The next process was searching for themes, reviewing themes, defining and naming themes, and producing the report, which was applied iteratively to ensure the rigour and analytical depth of the findings. NVivo 14 software was used to manage the coding process. Four principal themes emerged from the analysis: (1) perceived educational value of generative AI, (2) ease of use and smart device accessibility, (3) institutional enablers and barriers, and (4) ethical concerns and responsible AI use. Table 2 presents a summary of the thematic framework derived from the analysis.

4. Findings

4.1 Perceived Educational Value of Generative AI (Theme 1)

The overwhelming majority of participants affirmed that generative AI tools, particularly ChatGPT, offered significant educational value in their accounting studies. Students described using AI to deconstruct complex accounting standards, receive personalised explanations of financial concepts, and simulate real-world accounting scenarios for practice. This finding is consistent with the TAM construct of perceived usefulness, which posits that individuals are more likely to adopt a technology when they believe it will enhance their task performance (Davis, 1989; Rawashdeh *et al.*, 2026).

A Level 400 participant from BBAU3 explained:

"When I do not understand a concept in financial accounting, I ask ChatGPT to explain it in simple terms and give me examples. It always helps. My grades have improved since I started using it."

Also, a level 200 student at BBAU1 responded this way:

"I use Meta AI for questions asked in class, and I can actively participate in class more, and it has built my confidence."

Another final-year participant from BBAU4 described AI as transformative to their study habits:

"ChatGPT has been a lifesaver. I do not know the last time I was at the library to study. For any assignments that we are given, I upload them to ChatGPT, and it gives me the response I am looking for. In my last exams, I just inputted the topics and authors and asked it to explain the concepts to a novice, and it gave me exactly what I wanted. Studying has never been this exciting; with the click of my fingers, I have everything I need."

This account warrants careful analytical attention. While it reflects a genuinely high level of perceived usefulness, consistent with TAM's predictions, it also describes a pattern of use that raises serious academic integrity concerns. Uploading assignments to ChatGPT and submitting the generated output without critical engagement represents a form of unacknowledged AI-assisted work that falls outside the boundaries of academic honesty in most institutional frameworks. This type of usage, where students substitute AI generation for their own intellectual effort, is precisely what Tharapos et al. (2025) identified as one of the most significant governance challenges of the generative AI era in accounting education. The absence of institutional policy in these universities (as documented in Theme 3) means students receive no guidance to distinguish between legitimate AI-assisted learning and academically dishonest AI-dependent submission. Educators and curriculum designers must therefore address not only access to AI tools but the ethical framework within which students are taught to use them.

This aligns with Tharapos *et al.*'s (2025) finding that AI tools positively contribute to accounting students' skill development when used as a deliberate pedagogical complement rather than a shortcut. Students also noted that generative AI enabled them to engage in self-directed, iterative learning, asking follow-up questions and receiving tailored responses, a modality of instruction that is rarely achievable in the large-class environments characteristic of Ghanaian private universities.

Importantly, students drew clear distinctions between productive and unproductive AI use. Those who engaged with AI dialogically, using it to interrogate and test their own understanding, reported greater perceived learning gains than those who used it primarily for answer retrieval. This distinction resonates with Zhou and Luo's (2025) conceptualisation of AI as a *learning partner* rather than a *knowledge proxy*, and underscores the importance of cultivating critical AI literacy alongside tool access in accounting education.

4.2 Ease of Use and Smart Device Accessibility (Theme 2)

Participants consistently identified the ease of use of generative AI tools as a fundamental enabler of adoption, closely mirroring the PEOU construct of TAM. The smartphone emerged as the dominant smart learning device through which accounting students accessed generative AI tools, with 70.8% of participants relying on mobile devices for their AI-mediated learning activities. The intuitive conversational interface of ChatGPT was specifically lauded by participants as reducing the technical barrier to AI engagement. The following are responses from respondents:

One participant from BBAU4 noted:

"I use my phone for everything: ChatGPT, YouTube tutorials, even my e-learning portal. It is very convenient because I do not own a laptop. The ChatGPT app is simple; you just type your question, and the answer comes. I do not need any training to use it."

Similarly, another participant explained:

"I was initially afraid that AI tools would be complicated to use, like some of the accounting software we were taught in school. But ChatGPT is nothing like that. You talk to it like you are chatting with a friend. That made me comfortable very quickly."

A Level 300 participant also highlighted the benefits of using a tablet for AI-assisted learning:

"I use my tablet, which my parents bought for me specifically for school. It makes accessing AI tools much easier because the screen is bigger and I can have my notes open on one side and ChatGPT on the other".

However, ease of use was found to be significantly mediated by infrastructural constraints. Participants from private universities in peri-urban locations reported frequent disruptions to AI access caused by unreliable internet connectivity and high data costs, echoing the findings of Boruzie *et al.* (2025) regarding the infrastructural limitations of ICT integration in Ghanaian accounting education.

As one participant noted:

"ChatGPT is easy to use, but the internet on campus is very slow. Sometimes I have to wait very long for a response, or I go offline entirely."

Furthermore, Participant 7 from BBAU2 said this:

"The only problem is data. Sometimes I finish my data bundle in the middle of studying, and I have to stop everything. If the university could provide free Wi-Fi that actually works, that would change a lot for students like me."

Respondent 4, a final-year student from BBAU2, said this:

"My challenge, though, is that our campus internet is very unreliable. There are days I cannot access anything because the connection drops every few minutes. It is very frustrating when you are in the middle of something important."

These findings highlight that while generative AI tools are designed for accessibility, their educational utility is contingent on reliable digital infrastructure, a factor that Ghanaian private university administrators must urgently address.

4.3 Institutional Enablers and Barriers (Theme 3)

Institutional support emerged as a critical moderator of the relationship between generative AI availability and knowledge acquisition outcomes among participants. Students at private universities where faculty had been trained in AI-assisted pedagogy and where AI use was formally encouraged in course outlines reported markedly richer learning experiences than those at institutions where AI remained a peripheral or unacknowledged tool. This finding reinforces Alsharari and Habashi's (2025) argument that personalised AI-enabled learning in accounting education requires deliberate institutional investment and policy coherence.

The most significant institutional barrier identified by participants was the absence of a formal AI policy in their universities. Most participants were uncertain whether the use of generative AI tools in their assignments was academically permissible, leading to either avoidance or covert use, neither of which maximises the educational potential of AI.

As one Level 300 accounting student noted:

"We are not sure if using ChatGPT for our assignments is allowed or not. No one has told us clearly. So some of us use it quietly."

Similarly, respondent 15, from BBAU4, said this:

"Our school has not given us any guidance on how to use AI for studies. No lecturer has officially introduced us to these tools or explained how they can help with our accounting coursework. I discovered ChatGPT on my own through a friend. I think the university is behind on this. Other schools in other countries are already teaching students how to use AI responsibly. We are being left out, and that will affect us when we enter the job market, and everyone else is already comfortable with these technologies."

In addition, respondent 23 said this

"One of my lecturers actually discouraged us from using AI tools. He said it would make us lazy and that we should rely on our textbooks and lecture notes. But I think that is an outdated way of thinking. AI is not going away. What the university should do instead is teach us how to use it properly and ethically, not ban it. When lecturers are against it, students end up using it secretly, which is worse because there is no guidance on how to use it well."

A respondent from BBA U1 said this:

"I am honestly confused about the rules. I want to use ChatGPT to help me understand topics, but I am not sure where the line is between using it to learn and using it to cheat. Nobody at the university has clarified this for us. I asked my course representative, and even she was not sure. I think if the university published a clear policy, saying this is allowed and this is not, students would use AI more confidently and more honestly. Right now, the silence is creating a lot of uncertainty."

This finding corroborates Machkour and Abriane's (2025) observation that ethical ambiguity around generative AI use in Ghanaian higher education is a structural governance challenge that requires urgent institutional attention.

4.4 Ethical Concerns and Responsible AI Use (Theme 4)

Ethical concerns occupied a prominent position in participants' narratives about generative AI use in their accounting studies. Three sub-themes were predominant: academic integrity, over-reliance on AI, and the risk of AI-generated misinformation in accounting contexts. On academic integrity, participants expressed concern that some peers submitted AI-generated work as their own, undermining the value of accounting

qualifications. This concern is well-documented in recent literature (Tharapos *et al.*, 2025; Tabiri *et al.*, 2026) and represents one of the most complex governance challenges facing accounting educators in the generative AI era.

Participants also expressed anxiety about the accuracy of AI-generated accounting content.

As one student explained: *"Sometimes ChatGPT gives you a wrong answer, and it sounds very confident. In accounting, if you get a number wrong, the whole statement is wrong. You have to verify everything."*

Respondent from BBAU4 said this:

"I worry about how some of my colleagues use these tools. I have seen people copy entire answers from ChatGPT and submit them as their own work without even reading through what was generated. That defeats the whole purpose of education. If you do not understand what you are submitting, you will fail in the professional world. Accounting is a field where people's money and livelihoods depend on your accuracy. You cannot outsource your thinking to a machine and call yourself an accountant."

One participant explained:

"My biggest concern is that ChatGPT sometimes gives you wrong information, and it does so with a lot of confidence. I once asked it about a specific IFRS standard, and it gave me an answer that sounded very authoritative, but when I checked my textbook, the details were different. In accounting, a small error can throw off an entire financial statement. So I never rely on AI as my only source. I use it to get a starting point, and then I verify everything. Students who do not do this are taking a serious risk."

Another participant emphasised the professional implications of excessive dependence on AI:

"I think about privacy a lot when I use these tools. Sometimes when I am working on a case study that involves real company data, I am not sure whether I should paste that information into ChatGPT. What happens to the data after I send it? Can the company's information be exposed? These are questions I have never been able to get answers to from my university. I still use AI, but I am more careful now. I try not to input anything sensitive. I just wish someone would educate us properly on these things."

These concerns reflect broader discussions in the literature regarding AI hallucinations and misinformation in educational contexts (Alahmed, 2025; Wale-Fadairo & Ige, 2025). Participants therefore emphasised the importance of verification, critical evaluation, and independent judgment when using AI-generated content.

5. Discussion

The four themes identified in this study collectively reveal a more nuanced picture of generative AI adoption in accounting education that both confirms and extends the UTAUT framework (Venkatesh et al., 2003). Performance expectancy and effort expectancy, UTAUT's counterparts to TAM's perceived usefulness and ease of use, are clearly evidenced in participants' accounts, validating the framework's core predictions. However, the findings demonstrate that UTAUT's two additional constructs, social influence and facilitating conditions, are in fact the more decisive factors shaping adoption outcomes in this context. Students' AI use was strongly mediated by peer norms, instructor endorsement, and the presence or absence of institutional policy, and was constrained in practice by infrastructure deficits that no level of individual motivation could overcome. This cross-cutting insight constitutes the study's core theoretical contribution: in resource-constrained, institutionally ambiguous educational environments, facilitating conditions and social influence are not peripheral moderating variables but central determinants of whether technology adoption translates into meaningful educational engagement.

A striking finding that cuts across Themes 1, 3, and 4 is the role of institutional silence in shaping student behaviour. Where universities have not articulated clear policies on AI use, students navigate ambiguity covertly, using tools without guidance on academic integrity, data privacy, or responsible engagement. UTAUT's social influence construct anticipates that perceived institutional and peer endorsement shapes adoption, but this study reveals a more troubling corollary: the absence of any institutional position, neither endorsement nor prohibition, produces unguided and often academically problematic use.

This dynamic more closely resembles what institutional theorists describe as a legitimacy vacuum, in which the absence of formal norms produces informal and inconsistent practice that UTAUT does not explicitly model. Future research should explore how the formalisation of institutional AI governance frameworks alters both the quality and ethics of student AI use in accounting programmes.

The findings also complicate the distinction between productive and unproductive AI use. Students who engaged dialogically with generative AI, using it to interrogate their own understanding and generate follow-up questions, reported stronger perceived learning gains than those who used it primarily to retrieve answers. This distinction is consistent with Zhou and Luo's (2025) conceptualisation of AI as a learning partner rather than a knowledge proxy. However, the data also reveal that without deliberate pedagogical scaffolding from faculty, many students default to answer-retrieval behaviour. This finding has direct implications for accounting educators: the educational value of generative AI is not inherent in the tool itself but is contingent on how students are taught to engage with it. Curriculum redesign that embeds critical AI literacy alongside disciplinary content is therefore a prerequisite for realising the knowledge acquisition benefits evidenced in this study.

Finally, the infrastructure deficit identified in Theme 2 raises equity concerns that are undertheorised in the existing AI-in-education literature. When the educational utility of generative AI is contingent on reliable internet connectivity and device access, students from lower socioeconomic backgrounds or peri-urban university locations are systematically disadvantaged. This finding aligns with broader critiques of techno-optimism in educational technology adoption in Africa and underscores the need for policy interventions at both the institutional and national levels to ensure equitable AI access across Ghana's higher education landscape.

6. Conclusion

6.1 Theoretical Implications

This study makes three contributions to technology acceptance theory. Initially, it provides qualitative validation of UTAUT (Venkatesh et al., 2003) in the domain of generative AI adoption in accounting education, demonstrating that all four UTAUT constructs, performance expectancy, effort expectancy, social influence, and facilitating conditions, are evidenced in students' lived experiences. Following this, it advances UTAUT scholarship by showing that in institutionally ambiguous environments, social influence operates not only through positive endorsement but through the absence of normative guidance, producing unregulated adoption behaviour that the original model does not theorise. Lastly, by deploying UTAUT qualitatively as a set of sensitising concepts rather than as a variance-explaining instrument, this study extends UTAUT's methodological application record into interpretive inquiry, demonstrating the framework's value for generating context-rich theoretical insights in under-researched developing-country educational settings.

6.2 Practical Implications

These findings carry several important practical implications for private universities in Ghana, the Ghana Tertiary Education Commission (GTEC), and accounting educators. Primarily, private universities should develop clear, institution-wide AI use policies that articulate the conditions under which generative AI tools may be used in accounting coursework, assessment, and professional development activities. Also, accounting faculty in private Ghanaian universities must be equipped through structured professional development programmes to leverage generative AI as a pedagogical tool and to guide students in using AI critically, ethically, and effectively. In addition, university management and government stakeholders should invest in digital infrastructure, particularly reliable internet connectivity and affordable smart device access programmes, to ensure that the benefits of generative AI are equitably accessible to all accounting students, regardless of socioeconomic background.

6.3 Limitations and Future Research Directions

This study is subject to several limitations. The exclusive focus on private universities in Ghana limits the transferability of findings to public university contexts, which face different institutional dynamics, resource constraints, and student demographics.

The purposive sampling strategy, while appropriate for qualitative inquiry, precludes statistical generalisation. Future research should adopt mixed-methods designs to quantitatively validate the qualitative themes identified in this study, extend the scope of inquiry to public universities and other African countries, and examine how generative AI adoption evolves as the technology matures and as institutional governance frameworks develop. Additionally, future studies should explore the specific role of AI tools in shaping the accounting professional competency development of Ghanaian students, a dimension that moves beyond knowledge acquisition to consider employability and lifelong learning outcomes.

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