Perceptions of Artificial Intelligence in Accounting Education in Higher Education: A Systematic Literature Review

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ABSTRACT

The rapid development of artificial intelligence (AI) has significantly reshaped instructional practices in accounting education within higher education institutions. This study conducts a systematic literature review to synthesize current empirical research and address a notable gap in the integrated understanding of instructional practices and perceived outcomes. Guided by the PRISMA 2020 framework, the primary objectives are to identify major research themes and examine how AI is applied, including the associated learning outcomes, benefits, and challenges reported in the literature.

The methodology involved a systematic search of three electronic databases, Scopus, Web of Science, and ERIC, retrieving peer-reviewed empirical studies published between 2021 and 2025. A total of 22 articles met the inclusion criteria and were analyzed using a thematic synthesis approach. Results indicate that research is predominantly concentrated on "challenges, risks, and ethical concerns" (59.09%), "adoption and acceptance of AI" (54.55%), and "perceived benefits" (45.45%). Geographically, research is heavily focused on Asian emerging economies, particularly Indonesia and Malaysia, while methodologically, quantitative surveys utilizing structural equation modelling (SEM) prevail over qualitative or experimental designs. Key findings suggest that while AI enhances learning efficiency and higher order skills such as critical thinking, adoption is primarily driven by perceived usefulness and users' digital competencies. Conversely, barriers such as academic integrity, overreliance, and data privacy remain significant concerns shaping implementation.

This review concludes that the current research landscape is primarily technology-adoption oriented, with limited emphasis on pedagogical transformation or learning theory. Future research should move beyond feasibility studies to develop systematic pedagogical frameworks and evaluate the long-term impact of AI on accounting competencies and professional readiness.

Keyword: Artificial intelligence; Accounting education; Higher education; Systematic literature review.

INTRODUCTION

Artificial intelligence (AI) technologies are rapidly reshaping educational practices across multiple disciplines, including accounting education in higher education institutions. Recent developments in AI, particularly data-driven systems and generative AI tools, have created new possibilities for designing teaching activities, supporting student learning, and conducting assessment within accounting courses. From a pedagogical standpoint, the integration of AI is increasingly viewed through the lens of constructivist learning theory, where AI serves as a cognitive "scaffolding" that enables students to navigate complex financial datasets and develop professional skepticism (Venter et al., 2025). This evolution suggests that AI is not merely an efficiency tool but a transformative agent that redefines the boundaries of experiential learning in the accounting curriculum (Promma et al., 2025).

Consequently, an increasing number of empirical studies have investigated how AI technologies are adopted and interpreted by both students and educators in accounting education contexts. Previous research has addressed topics such as technology acceptance, perceived usefulness, and ethical considerations surrounding AI use in

higher education. A significant portion of existing research focuses on students' willingness to use AI and the factors influencing its adoption, often drawing upon established technology acceptance theory frameworks such as TAM and UTAUT (Bui et al., 2025; Maruszewska et al., 2024). However, critics argue that an over-reliance on adoption-centric models limits our understanding of how AI actually reshapes professional competencies and "higher-order" cognitive skills beyond mere intention to use (Meesook et al., 2025). As the accounting profession shifts toward advisory and strategic roles, the disconnect between technological acceptance and the actual pedagogical outcomes becomes more pronounced (Ismail & Krishnanraw, 2025).

Furthermore, recent studies have increasingly emphasized ethical and risk-related issues associated with AI use, particularly concerning academic integrity and the responsible use of AI technologies in educational contexts (Dosumu et al., 2025; Sundkvist & Kulset, 2024). However, these issues are often discussed in isolation from teaching practices and learning experiences. Consequently, a comprehensive understanding of the relationship between teaching benefits, challenges faced, teaching methods, and learning experiences remains insufficient. There is a critical need for a synthesized conceptual framework that links AI-driven instructional strategies to professional readiness, while simultaneously mitigating the risks of over-reliance on automated systems (Kurniawan & Putri Hendratno, 2025).

To date, limited systematic efforts have been made to integrate empirical findings on AI in accounting education by simultaneously examining instructional practices and the perceived outcomes associated with its use. This gap limits the ability of educators and researchers to develop a coherent understanding of how AI is shaping accounting education in higher education. By synthesizing the latest empirical evidence from 2021 to 2025, this review aims to provide a foundational reference that transcends descriptive synthesis toward a deeper theoretical integration of AI in accounting pedagogy.

Research Objectives

The objectives of this study were:

1. To identify the major research themes in empirical studies on artificial intelligence in accounting education.

2. To examine how artificial intelligence is applied in accounting education and to integrate the learning outcomes, benefits, and challenges associated with its use.

Research Questions

The research questions of this study were:

1. What are the major research themes in empirical studies on artificial intelligence in accounting education?

2. How is artificial intelligence applied in accounting education, and what learning outcomes, benefits, and challenges are reported in literature?

METHODOLOGY

Research Design

This study adopted a systematic literature review (SLR) to integrate empirical research on the use of artificial intelligence (AI) in accounting education in higher education. A systematic approach was employed to ensure a transparent and reproducible review process, given the rapid growth and thematic diversity of studies in this field.

To ensure a rigorous and transparent selection process, this study utilized the PRISMA 2020 framework (Page et al., 2021) as a foundational roadmap for managing the progression from initial record identification to the final inclusion of empirical works. In line with the objectives of this review, only peer-reviewed empirical studies

conducted in higher education contexts were considered. Rather than conducting a meta-analysis, this study applied a thematic synthesis approach (Thomas & Harden, 2008)to organize and analyze the included literature across key research focus areas corresponding to the research questions.

An initial analytical framework was developed based on the research questions, covering themes such as adoption and acceptance of AI, perceptions and attitudes toward AI, AI-supported teaching approaches, learning experiences and skill development, perceived benefits of AI, challenges, risk, and ethical concerns. The analysis followed a primarily deductive coding strategy guided by this framework, with inductive refinement allowed where additional themes emerged during the review process. Relevant findings were identified from the results and discussion sections of each study, and individual studies could contribute to multiple themes where appropriate. The coding framework was iteratively refined through repeated comparison across studies to ensure conceptual consistency.

Both perception-based evidence (e.g., surveys and interviews) and implementation-oriented evidence (e.g., instructional designs, classroom interventions, and reported learning experiences) were included, provided that the studies addressed AI use within accounting education.

Search Strategy

To pinpoint pertinent research concerning AI integration within the realm of higher accounting education, a rigorous and structured search protocol was executed. Three electronic databases, Scopus, Web of Science (WoS), and ERIC, were selected due to their broad coverage of education, accounting, and interdisciplinary research.

The search terms were developed by combining keywords related to artificial intelligence, for example, “artificial intelligence,” “AI,” “generative AI,” “ChatGPT” with terms related to accounting education, for example, “accounting education,” “accounting students,” “accounting curriculum”. The search was applied to the title, abstract, and keywords fields, where applicable. Table 1 shows the summary of database specific search strings utilized for literature identification.

While this strategy ensured a focused retrieval of studies explicitly situated within accounting education, pedagogical or instructional studies in which AI was embedded in accounting related teaching practices but not explicitly labeled as accounting education research may be less visible within the retrieved corpus.

Table 1 Table Shows the summary of database specific search strings utilized for literature identification

Database	**Search string**
Scopus	TITLE-ABS-KEY (("artificial intelligence" OR "AI" OR "chatbot*" OR "generative AI" OR "large language model*" OR "LLM*" OR "intelligent system*") AND ("accounting education" OR "accounting curriculum" OR "teaching accounting" OR "accounting pedagogy" OR "accounting student*"))
Web of Science	TS=(("artificial intelligence" OR AI OR chatbot* OR "generative AI" OR "large language model*" OR "LLM*" OR "intelligent system*") AND ("accounting education" OR "accounting curriculum" OR "teaching accounting" OR "accounting pedagogy" OR "accounting student*"))
ERIC	("artificial intelligence" OR AI OR chatbot* OR "generative AI" OR "large language model*" OR LLM* OR "intelligent system*") AND ("accounting education" OR "accounting curriculum" OR "teaching accounting" OR "accounting pedagogy" OR "accounting student*")

Methodological rigor was upheld by filtering the retrieved literature to include only peer-reviewed journal papers in English, ensuring that the evidence base remained contemporary and of high academic quality. These restrictions were applied consistently across all databases. The overall search and selection procedure followed established guidance for systematic literature reviews. To ensure a minimum level of methodological rigor, only

empirical studies with clearly described research designs, data sources, and analytical procedures were included.

Inclusion and Exclusion Criteria

Prior to the screening process, explicit inclusion and exclusion criteria were defined to ensure consistency and transparency in study selection. The criteria focused on the research context, study population, methodological approach, and the role of artificial intelligence in the selected studies. Table 2 presents the inclusion and exclusion criteria applied in selecting the articles for this review.

Table 2 Table shows the inclusion and exclusion criteria in choosing the articles

Criteria	**Inclusion**	**Exclusion**
Database source	Scopus, Web of Science, ERIC	Other databases
Document type	Journal articles	Conference papers, book chapters, books, theses, reports, editorials, reviews
Language	English	Non-English publications
Publication year	2021–2025	Publications before 2021 or after 2025
Subject area / categories	Social Sciences; Business, Management and Accounting	Studies outside these subject areas
Educational context	Tertiary education / Higher education	Primary education, secondary education, professional training only
Relevant keywords	Keywords Relevant to Artificial Intelligence and Accounting Education	Irrelevant to artificial intelligence and accounting education
Full-text availability	Full text available and accessible for eligibility assessment and data extraction	Full text unavailable or inaccessible

These criteria were applied consistently throughout the title and abstract screening and full-text eligibility assessment stages, in accordance with established guidance for systematic literature reviews.

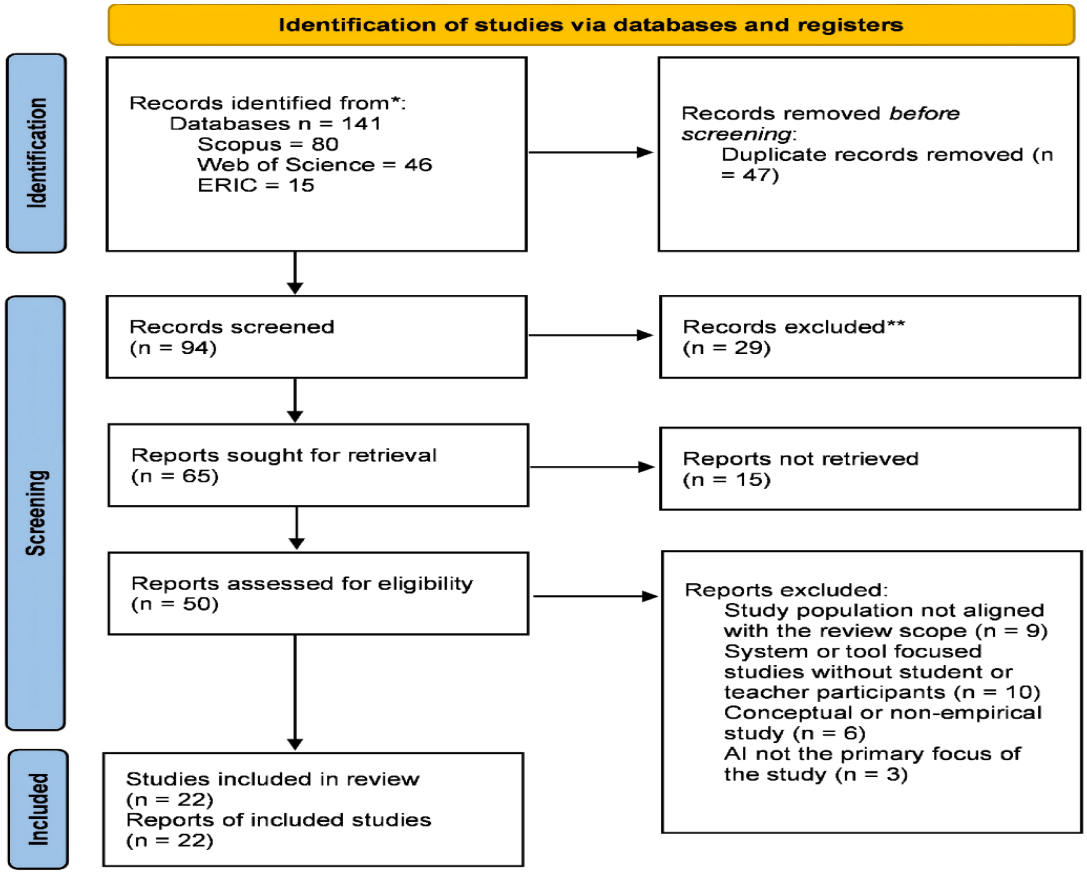
Study Selection Process

Adhering to the PRISMA 2020 standards, the study's selection procedure was executed through four successive phases: identification, screening, eligibility appraisal, and final inclusion.

The preliminary database search yielded a total of 141 records during the identification phase. Following the elimination of 47 duplicate entries, 94 unique citations were advanced to the title and abstract vetting stage. In the subsequent screening process, 29 items were omitted based on established exclusion parameters, leaving 65 articles to be sought for full-text acquisition.

Of the reports sought for retrieval, 15 could not be accessed, leaving 50 full-text articles assessed for eligibility. Following full-text assessment, 28 articles were excluded for specific reasons, including misalignment of study population with the review scope, system or tool focused studies without student or teacher participants, conceptual or non-empirical designs, and studies in which AI was not a main research focus. Ultimately, 22 studies met all inclusion criteria and were included in the final review. The complete study selection process is illustrated in the PRISMA flow diagram (Figure 1).

Figure 1 PRISMA 2020 flow diagram illustrating the multi-stage selection process, from initial database identification to final study inclusion



During the full-text eligibility assessment, studies were excluded if they did not meet the predefined inclusion criteria. The most common reasons for exclusion included: (1) the absence of an explicit focus on accounting education, despite references to AI or education more broadly; (2) non-empirical study designs, such as conceptual papers or commentaries; (3) studies conducted outside higher education contexts; and (4) insufficient methodological detail to support empirical analysis. Each excluded study was assigned a main exclusion reason to ensure consistency in the selection process.

Data Extraction and Synthesis

Data extraction was conducted using a structured extraction framework to ensure consistency across the included studies. For each study, key information was systematically recorded, including publication year, country or region, research method, study participants, and main research focus.

Following data extraction, a thematic synthesis approach was employed to analyze and organize the included studies. Based on the research objectives of this review, the studies were classified into 6 thematic categories corresponding to the research questions: adoption and acceptance of AI, perceptions and attitudes toward AI, AI-supported teaching approaches, learning experiences and skill development, perceived benefits of AI, and challenges, risks, and ethical concerns. Since a single study may span multiple fields, multiple classifications are permitted under reasonable circumstances.

FINDINGS

The following results synthesize the outcomes of the systematic literature search as they pertain to the established research inquiries. First, the major research themes identified in empirical studies on artificial intelligence in accounting education are presented to address RQ1. Second, the reported applications of AI in accounting education and the associated learning outcomes, benefits, and challenges are integrated to address RQ2.

Overview of Included Studies

A total of 22 peer-reviewed empirical works were synthesized in this review to investigate the implementation of artificial intelligence within the landscape of higher education accounting instruction. Table 3 presents key characteristics of the included studies, including publication year, country or region, research methodology, research subjects, and main research focus.

Table 3 Characteristics of Included Studies

NO.	Author(s) / Year	Country / Region	Research Method	Participants	Main Research Focus
1	Bui, H. Q., Phan, Q. T. B., Nguyen, H. T. 2025	Vietnam	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Adoption and acceptance of AI - Perceived benefits of AI
2	Han, M., Mustafa, H., Kharuddin, S. 2025	China	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Adoption and acceptance of AI - Perceptions and attitudes toward AI
3	Kurniawan, C., Putri Hendratno, S. P. 2025	Indonesia	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Learning experiences and skill development - Challenges, risks, and ethical concerns
4	Ismail, K., Krishnanraw, J. 2025	Malaysia	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Adoption and acceptance of AI - Perceived benefits of AI
5	J Krishnanraw, K Ismail. 2025	Malaysia	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Adoption and acceptance of AI - Perceived benefits of AI - Challenges, risks, and ethical concerns
6	Al-Okaily, M. 2025	Jordan	Quantitative survey study	Accounting students (higher education)	- Adoption and acceptance of AI
7	A Zhou, Y Luo. 2025	United States	Quantitative survey study	Accounting students (higher education)	- Learning experiences and skill development - Perceived benefits of AI - Challenges, risks, and ethical concerns
8	Venter, J., Coetzee, S. A., Schmulian, A.	South Africa	Mixed-methods	Accounting students	- AI-supported teaching approaches

	2025		(quantitative-dominant)	(higher education)	- Challenges, risks, and ethical concerns
9	Fachrurrozie, F., Nurkhin, A., Santoso, J. T. B., Mukhibad, H., Wolor, C. W. 2025	Indonesia	Quantitative survey (SEM / UTAUT-based)	Accounting educators (higher education)	- Adoption and acceptance of AI - AI-supported teaching approaches - Challenges, risks, and ethical concerns
10	Musyaffi, A. M., Adha, M. A., Mukhibad, H., Oli, M. C. 2024	Indonesia	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Adoption and acceptance of AI - Challenges, risks, and ethical concerns
11	Dosumu, O., Porumb, V. A., Stafford, A., Zimmer, A. 2025	United Kingdom	Qualitative study	Accounting educators (higher education)	- AI-supported teaching approaches - Challenges, risks, and ethical concerns
12	Gaviria-Rodríguez, D. Y., Valencia-Arias, A., Arango-Arango, J. G., Raunelli Sander, J. M., Verde Flores, L., Valencia, J. 2025	Peru	Quantitative survey study	Accounting students (higher education)	- Adoption and acceptance of AI - AI-supported teaching approaches
13	Damerji, H., Salimi, A. 2021	United States	Quantitative correlational study	Accounting students (higher education)	- Adoption and acceptance of AI
14	Musyaffi, A. M., Baxtishodovich, B. S., Afriadi, B., Hafeez, M., Adha, M. A., Wibowo, S. N. 2024	Indonesia	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Adoption and acceptance of AI - Perceived benefits of AI - Challenges, risks, and ethical concerns
15	Voshaar, J., Wecks, J. O., Plate, B. J., Zimmermann, J. 2025	Germany	Quantitative experimental study	Undergraduate students (higher education)	- AI-supported teaching approaches - Learning experiences and skill development - Challenges, risks, and ethical concerns
16	Sundkvist, C., Kulset, E. M. 2024	Norway	Quantitative survey study	Accounting students (higher education)	- Adoption and acceptance of AI - Perceptions and attitudes toward AI - Challenges, risks, and ethical concerns

17	Maruszewska, E. W., Ziemba, E. W., Grabara, D., Renik, K. 2024	Poland	Quantitative survey study	Accounting students (higher education)	- Adoption and acceptance of AI - Perceived benefits of AI - Challenges, risks, and ethical concerns
18	Nusa, I. B. S., Rachmanto, A., Alhilo, M. H. H. 2024	Indonesia	Quantitative survey (PLS-SEM)	Accounting educators (higher education)	- AI-supported teaching approaches - Perceived benefits of AI - Challenges, risks, and ethical concerns
19	Promma, W., Imjai, N., Usman, B., Aujirapongpan, S. 2025	Thailand	Quantitative survey (PLS-SEM / SEM)	Accounting students (higher education)	- Learning experiences and skill development - Perceived benefits of AI
20	Meesook, K., Imjai, N., Usman, B., Vongchavalitkul, B., Aujirapongpan, S. 2025	Thailand	Quantitative survey (PLS-SEM)	Accounting students (higher education)	- Learning experiences and skill development - Perceived benefits of AI
21	Latifah, L., Setiyani, R., Arief, S., Susilowati, N. 2023	Indonesia	Quantitative survey study	Accounting students (higher education)	- Challenges, risks, and ethical concerns - Perceptions and attitudes toward AI
22	Grabinska, B., Andrzejewski, M., Grabinski, K. 2021	Poland	Quantitative survey study	Students and graduates (higher education)	- Perceptions and attitudes toward AI - Perceived benefits of AI - AI-supported teaching approaches

From a geographical perspective, the included studies span multiple regions. A portion of the research was conducted in Asia, particularly concentrated in Indonesia, Malaysia, Thailand, China, Vietnam, and Jordan. This reflects the growing attention from developing and emerging economies toward integrating artificial intelligence into accounting education. Several studies were also conducted in Europe (including Poland, Germany, Norway, and the United Kingdom), while research in the United States was relatively scarce. This distribution indicates that although AI research in accounting education exhibits regional disparities, it generally maintains broad geographical coverage.

In terms of research methodology, most included studies employed quantitative approaches, with questionnaire surveys being the most prevalent design. Many of these studies utilized structural equation modelling techniques to examine relationships among AI-related constructions (such as intention to adopt, perceive usefulness, and self-efficacy). Fewer studies employed experimental designs, focusing on the impact of AI tools on learning or assessment-related outcomes. Additionally, a small number of studies utilized qualitative or mixed methods approaches, primarily exploring teaching practices, assessment processes, and educators' reflections on the pedagogical implications of AI. The included studies varied in methodological rigor and analytical depth, reflecting the dynamic developmental nature of AI research within accounting education.

Regarding research participants, most studies focus on accounting students in higher education, emphasizing students' perspectives on AI applications, learning experiences, and behavioral intentions. A smaller number of studies address accounting educators, covering teaching practices, curriculum design, and professional challenges posed by AI applications. One study simultaneously included both current students and graduates, enabling comparative analysis of differences in AI perceptions across academic stages and early career development.

Overall, the characteristics summarized in Table 3 demonstrate that existing empirical research on artificial intelligence in accounting education is predominantly quantitative, student centered and geographically concentrated in specific regions.

Major Research Themes in AI Accounting Education Research

To address RQ1, the included studies were analysed to identify the major research themes examined in empirical research on AI in accounting education. 6 main research themes were identified through thematic synthesis: adoption and acceptance of AI, perceptions and attitudes toward AI, AI-supported teaching approaches, learning experiences and skill development, perceived benefits of AI, and challenges, risks, and ethical concerns.

Table 4 summarizes the distribution of research focus areas across the included studies. As individual studies could address more than one theme, multiple classifications were permitted.

Table 4 Research Focus of Included Studies

Research Focus	**Frequency (n)**	**Percentage (%)**
Adoption and acceptance of AI	12	54.55%
Perceptions and attitudes toward AI	4	18.18%
AI-supported teaching approaches	7	31.82%
Learning experiences and skill development	5	22.73%
Perceived benefits of AI	10	45.45%
Challenges, risks, and ethical concerns	13	59.09%

Among the 6 research focus areas, challenges, risks, and ethical concerns was the most frequently examined theme, appearing in 13 studies (59.09%). This was followed by adoption and acceptance of AI, which was addressed in 12 studies (54.55%), and perceived benefits of AI, reported in 10 studies (45.45%). Research focusing on AI-supported teaching approaches accounted for 7 studies (31.82%), while learning experiences and skill development appeared in 5 studies (22.73%). The least frequently examined theme was perceptions and attitudes toward AI, which was identified in 4 studies (18.18%).

Overall, the distribution indicates that existing research in accounting education has primarily focused on adoption related issues and ethical concerns, while comparatively fewer studies have examined attitudinal perspectives and learning outcomes.

Applications, Outcomes, Benefits, and Challenges of AI in Accounting Education

To address RQ2, the reviewed studies were further examined to identify how artificial intelligence has been applied in accounting education and what learning outcomes, benefits, and challenges have been reported in the literature. While 6 research themes were identified in addressing RQ1, the present section focuses on themes directly related to AI applications, learning outcomes, benefits, and challenges in accounting education.

Adoption and Acceptance of AI

Adoption and acceptance of artificial intelligence was one of the most frequently examined themes among the included studies. A total of 12 studies investigated factors influencing students or educators' intention to adopt AI in accounting education, predominantly drawing on technology adoption frameworks such as TAM and UTAUT.

The included studies span different stages of research maturity, ranging from earlier adoption oriented work (Damerji & Salimi, 2021)to more recent studies focusing on generative AI applications in accounting education. Adoption focused studies frequently relied on established behavioural models, including TAM and TPB, to explain students' intention to use AI in accounting education (Gaviria-Rodríguez et al., 2025; Maruszewska et al., 2024). Several studies examined accounting students' acceptance of generative AI tools particularly ChatGPT using extended technology acceptance frameworks (Al-Okaily, 2025; Bui et al., 2025).

Across these studies, perceived usefulness was consistently identified as a key predictor of AI adoption, indicating that students were more willing to use AI tools when they recognized clear academic or learning related benefits (Bui et al., 2025; Han et al., 2025). In contrast, the effect of perceived ease of use was less consistent, with some studies reporting a limited or indirect influence, particularly among students with higher levels of digital competence.

Several studies extended traditional adoption models by incorporating individual and contextual factors, including self-efficacy, digital literacy, technology readiness, habit, and social influence. Empirical evidence suggested that higher confidence in using technology and greater exposure to digital tools were associated with stronger adoption intentions (Krishnanraw & Ismail, 2025; Maruszewska et al., 2024). In addition, perceived risks and ethical concerns, such as academic integrity and overreliance on AI, were reported to negatively affect adoption intention in certain contexts (Musyaffi, Adha, et al., 2024).

AI-supported Teaching Approaches

AI-supported teaching approaches were addressed in 7 studies, focusing on how artificial intelligence was integrated into instructional practices, assessment design, feedback delivery, and curriculum development in accounting education.

Several studies explored the use of AI tools to enhance instructional efficiency and feedback quality. AI-supported feedback systems and generative AI applications were reported to assist educators in providing timely, individualized feedback and simplifying complex accounting concepts (Venter et al., 2025; Voshaar et al., 2025). These approaches were primarily discussed in relation to formative assessment and learning support rather than summative evaluation.

Other studies examined AI integration at the course or curriculum level, highlighting the potential of AI to support teaching design, learning activities, and assessment strategies in accounting programs (Fachrurrozie et al., 2025; Grabinska et al., 2021). From the educators' perspective, AI was viewed as a tool that could complement traditional teaching methods while also introducing new pedagogical challenges (Nusa et al., 2024).

Learning Experiences and Skill Development

Learning experiences and skill development were examined in 5 studies focusing on how AI use influenced students' learning processes and the development of accounting related competencies.

Several studies reported that AI use was associated with improvements in higher order skills, including critical thinking, problem-solving, and professional judgment. Empirical findings indicated that AI literacy and exposure to AI tools contributed to students' ability to handle complex accounting tasks and develop analytical capabilities (Meesook et al., 2025; Promma et al., 2025).

Other studies examined learning experiences related to cognitive engagement and dependency, noting both positive and negative effects. While AI tools supported learning efficiency, concerns were also raised regarding

reduced independent thinking or overreliance on AI-generated outputs (Kurniawan & Putri Hendratno, 2025; Zhou & Luo, 2025).

Perceived Benefits of AI

Perceived benefits of artificial intelligence were examined in 10 studies, focusing on advantages for learning efficiency, instructional support, and professional skill development.

Across the literature, AI was commonly perceived as beneficial for improving learning efficiency and task performance. Several studies reported that students valued AI tools for providing rapid access to information, assisting with problem-solving, and supporting the completion of accounting related tasks (Han et al., 2025; Ismail & Krishnanraw, 2025).

Other studies highlighted perceived benefits related to instructional quality and professional preparation. AI-supported applications were viewed as useful for enhancing feedback quality, supporting individualized learning, and preparing students for AI integrated professional environments (Nusa et al., 2024; Zhou & Luo, 2025).

Challenges, Risks, and Ethical Concerns

Challenges, risks, and ethical concerns represented the most frequently addressed topic in literature. Research within this area primarily examined potential negative implications of AI use in accounting education.

Several studies reported that concerns regarding academic misconduct, such as plagiarism, overreliance on AI generated content, and reduced critical engagement, posed significant challenges to AI adoption in educational settings (Musyaffi, Adha, et al., 2024; Sundkvist & Kulset, 2024).

In addition, ethical and risk related perceptions were found to influence students' and educators' attitudes toward AI. Issues related to data privacy, information accuracy, and loss of human judgment were identified as factors that could negatively affect trust in AI-supported learning tools (Grabinska et al., 2021; Latifah et al., 2023). Concerns related to trust and uncertainty regarding AI-supported learning were also highlighted, particularly in studies examining innovation and trust as antecedents of AI use in accounting education (Musyaffi, Baxtishodovich, et al., 2024; Sundkvist & Kulset, 2024). Some studies further suggested that heightened risk awareness could reduce intention to use AI, while others indicated that ethical concerns moderated the relationship between perceived usefulness and adoption intention.

Overall, the findings indicate that challenges and ethical considerations are central to understanding AI use in accounting education. Rather than acting as isolated barriers, these concerns interact with perceived benefits and adoption related factors, highlighting the importance of addressing ethical and risk related issues alongside technological and pedagogical considerations.

DISCUSSION

The findings of this review reveal several complex patterns in the emerging literature on artificial intelligence (AI) in accounting education.

Beyond Technology Acceptance: AI as Cognitive Scaffolding

First, the reviewed studies indicate that adoption and acceptance of AI constitute a central concern, predominantly utilizing TAM and UTAUT frameworks. While students' intention to use AI is shaped by pragmatic considerations like perceived usefulness and job relevance, this review argues for a theoretical shift. Rather than viewing AI merely as a tool for adoption, the integration of generative AI should be interpreted through the lens of Constructivism. AI acts as a "cognitive scaffolding" that allows students to automate lower-level data processing and focus on higher-order analytical tasks, such as professional judgment and critical thinking. This suggests that the "usefulness" reported in literature (Al-Okaily, 2025; Bui et al., 2025; Han et al., 2025; Ismail & Krishnanraw, 2025) is actually the facilitation of a deeper, more inquiry-based learning process.

The Pedagogical Gap: From Efficiency to Transformation

Second, the review shows that research on the pedagogical integration of AI remains underdeveloped, focusing largely on instructional efficiency like feedback delivery and content simplification. The current emphasis on AI as a "supplementary tool" (Fachrurrozie et al., 2025; Nusa et al., 2024; Venter et al., 2025) reflects a cautious, tool-centric approach rather than a transformative one. To maximize impact, accounting pedagogy must move toward Experiential Learning, where AI is used to simulate complex, real-world auditing or forensic accounting scenarios. This requires a fundamental redesign of assessment strategies, moving from "product-based" evaluation to "process-based" evaluation to ensure that AI supports, rather than replaces, the student's own cognitive development.

Critical Interrogation of Ethics and Risks

Third, ethical and risk-related considerations play a disproportionately central role in shaping perceptions of AI. A critical interrogation of this trend suggests that the dominance of "academic integrity" and "technological dependency" themes (Dosumu et al., 2025; Musyaffi, Adha, et al., 2024; Musyaffi, Baxtishodovich, et al., 2024; Sundkvist & Kulset, 2024) reflects an underlying tension between rapid automation and the traditional values of the accounting profession. The fear of "loss of human judgment" indicates that both educators and students perceive AI as a potential threat to the professional identity of accountants. This review posits that ethical concerns are not just barriers to adoption but are "moderators" that force a re-evaluation of what constitutes "essential" accounting knowledge in the AI era.

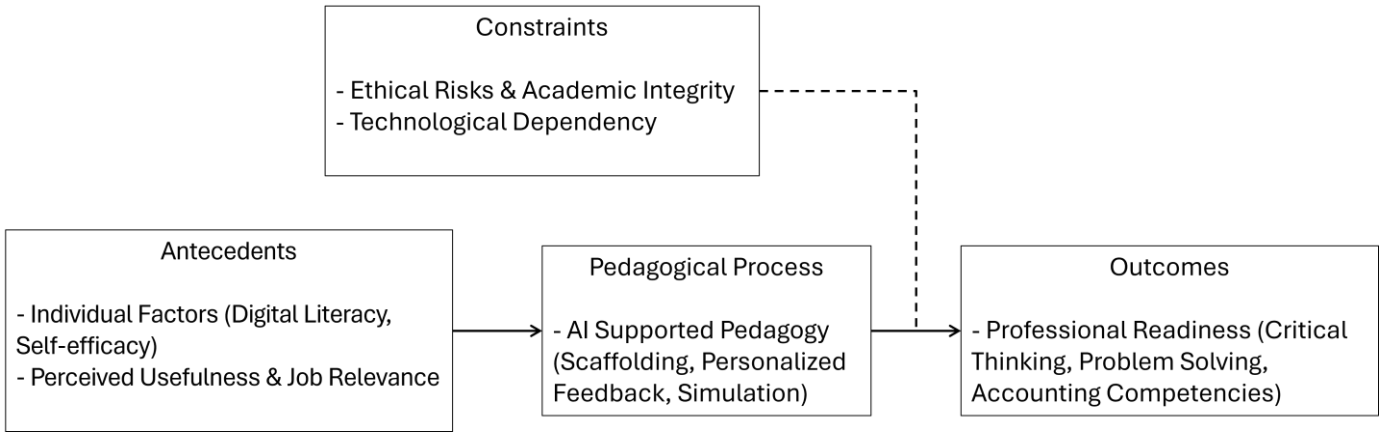
Regional and Methodological Reflections

Finally, the geographical concentration of research in Asian emerging economies the over-reliance on SEM-based quantitative surveys presents a significant limitation to the field's global applicability. The prevailing focus on "intentions" in developing contexts may miss the nuanced, classroom-level pedagogical struggles more common in qualitative studies within Western contexts. There is an urgent need for methodological diversity, including qualitative and mixed-methods designs, to capture the "lived experiences" of educators navigating AI-disrupted curricula.

A Proposed Conceptual Framework

To integrate the dispersed findings of current literature, this review proposes a conceptual framework that moves beyond basic technology acceptance to emphasize pedagogical transformation and professional outcomes. As illustrated in Figure 2, the framework links AI antecedents to pedagogical processes, while accounting for the moderating role of ethical risks.

Figure 2 Conceptual Framework of AI Integration in Accounting Education: Linking Antecedents, Pedagogical Processes, and Professional Outcomes



The framework posits that the successful integration of AI is predicated on specific Antecedents, notably students' digital literacy and perceived usefulness. However, this review argues that these factors do not directly

lead to professional readiness. Instead, they must be mediated by AI-Supported Pedagogical Processes, such as cognitive scaffolding and individualized feedback systems. In this stage, AI acts as a transformative agent that shifts the focus from rote data entry to higher-order analytical tasks.

Crucially, Ethical and Risk Constraints, including concerns over academic integrity and the loss of human judgment, act as significant moderators. If these risks are not managed through proactive curriculum redesign, they may hinder the development of independent critical thinking. Ultimately, when technology is aligned with pedagogical theory, the result is the enhancement of Accounting Competencies, ensuring students are prepared for an AI-disrupted professional landscape.

CONCLUSION

This systematic literature review integrates empirical research on the application of artificial intelligence in accounting education within higher education.

Summary of Findings

The review identifies six major research themes, with a predominant focus on "challenges, risks, and ethical concerns" (59.09%), "adoption and acceptance of AI" (54.55%), and "perceived benefits" (45.45%). Geographically, research is heavily concentrated in Asian emerging economies, particularly Indonesia and Malaysia. Methodologically, quantitative surveys utilizing structural equation modeling (SEM) prevail over qualitative or experimental designs. The results suggest that while AI is recognized for enhancing learning efficiency and critical thinking, its implementation is currently shaped by a tension between perceived usefulness and significant concerns regarding academic integrity and technological dependency.AI is commonly used as a learning support and instructional assistance tool, with reported benefits including improved learning efficiency, enhanced problem-solving support, and the development of higher-order cognitive skills. At the same time, the literature highlights important challenges related to academic integrity, technological dependency, and responsible AI use.

Theoretical and Practical Contributions

Unlike previous descriptive syntheses, this study makes a foundational contribution by moving beyond technology-adoption frameworks. By proposing a Conceptual Framework for AI Integration (Figure 2), this review links initial antecedents and pedagogical processes directly to professional accounting competencies. This theoretical integration highlights that AI should be viewed as a "cognitive scaffolding" rather than a mere efficiency tool, providing actionable strategies for educators to redesign curricula and assessment practices in response to AI disruption.

Future Research Directions

To address the current gaps in literature and maximize scholarly impact, future research should pursue the following four pathways:

Longitudinal Impact on Competencies: Researchers should conduct longitudinal studies to evaluate the long-term impact of AI on the development of core accounting competencies and student professional readiness over time.

Experimental Testing of AI Tools: Future studies should employ experimental and quasi-experimental designs to test the actual efficacy of specific AI-supported assessment tools and instructional interventions.

Comparative Stakeholder Perspectives: There is a critical need for comparative studies that examine the alignment or misalignment between student perceptions and educator/employer expectations regarding AI use.

Policy and Professional Standards: Research should investigate the intersection of AI adoption with institutional policymaking, professional accreditation standards, and ethical codes within the accounting profession.

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