

Integrating AI Into Accounting Education: Innovations, Ethical Considerations, and Pedagogical Shifts

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Abstract

The integration of Artificial Intelligence (AI) into accounting education is significantly transforming both pedagogical practices and research methodologies within the field. This paper examines how AI-driven tools are influencing teaching methods, curriculum development, and student learning experiences. It also explores AI's expanding role in academic research, highlighting its potential to streamline literature reviews, enhance data analysis, and support the development of new research frameworks. Key themes include AI's capacity to increase student engagement, personalizing instruction, and automate routine educational tasks, enabling educators to focus more on developing students' higher-order cognitive skills. At the same time, the paper addresses growing concerns related to over-reliance on AI, ethical challenges, and the risk of eroding essential accounting competencies. The findings underscore that while AI offers considerable promise for advancing accounting education and research, its successful implementation depends on maintaining pedagogical integrity, fostering critical thinking, and navigating ethical complexities. Finally, the paper considers how the evolving role of AI in scholarly inquiry invites reflection on the balance between automation and human judgment in knowledge creation. By situating these developments within the accounting domain, the paper contributes to broader discussions on the responsible adoption of AI in education.

Keywords: artificial intelligence, business education, accounting pedagogy, AI in academic research

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Introduction

Artificial Intelligence (AI) is increasingly influencing the landscape of higher education, transforming how knowledge is delivered, acquired, and evaluated. In accounting education, the integration of AI represents both an opportunity and a challenge. While early concerns focused on the potential misuse of AI tools by students seeking shortcuts, the growing prevalence and capability of these tools have prompted a more thoughtful reexamination of pedagogical approaches. Rather than resisting this change, educators are now considering how to effectively incorporate AI into their teaching, learning, and research frameworks (Akinwalere & Ivanov, 2022; Fachrurrozie et al., 2025).

This paper explores how AI is reshaping accounting education by focusing on three interrelated dimensions: innovations in curriculum design and pedagogy, transformations in student learning and experience, and the evolving landscape of academic research. It also highlights ethical considerations and the need for responsible integration. Drawing upon recent studies, the paper aims to provide a critical synthesis of emerging practices and debates within this dynamic field.

Curriculum Design and Pedagogical Shifts

AI is facilitating a profound transformation in the way accounting courses are structured and delivered. Traditionally, instruction in accounting has centered on lecture-based teaching and manual problem-solving activities. However, the adoption of AI tools is prompting educators to redesign their approaches by incorporating interactive and simulation-based modules. These intelligent learning environments are capable of adapting to student inputs in real time, thereby fostering greater engagement and allowing for more personalized learning experiences (Fachrurrozie et al., 2025; Valcea et al., 2024).

A growing number of instructors are utilizing AI-powered platforms that support automated data analysis, customized learning paths, and adaptive assessment techniques. These technologies not only streamline instructional delivery but also free up instructional time for more advanced, discussion-driven exploration of complex accounting problems. AI can, for example, be used to generate tailored financial scenarios for students to analyze—offering a practical, real-world dimension to classroom exercises and helping to cultivate critical thinking and professional judgment (Valcea et al., 2024).

This shift, however, requires that faculty themselves be equipped to engage with these emerging tools. The successful integration of AI into accounting education depends on instructors receiving appropriate training, not just in the operation of AI technologies but also in understanding their pedagogical and ethical implications. As Chan (2023) emphasizes, professional development efforts must extend to include support in instructional design, AI-supported assessment practices, and the responsible integration of technology into educational contexts. Without this parallel investment in faculty readiness, the pedagogical benefits of AI risk being unevenly implemented or misunderstood.

Student Experience and Learning Processes

AI has also introduced new levels of personalization into student learning experiences. Adaptive learning systems analyze individual progress and adjust content difficulty accordingly, which has been shown to increase motivation and retention (Akinwalere &

Ivanov, 2022). These platforms offer immediate feedback and recommendations, helping students navigate complex accounting concepts more effectively (Janaki & Mariyappan, 2024).

Automated grading systems and AI-generated study aids, such as content summaries and flashcards, improve efficiency but also pose risks. Students may become overly reliant on these tools, reducing their cognitive engagement with course material. Hooda et al. (2022) caution against the potential for surface-level learning when students bypass deeper analytical thinking.

Overuse of AI tools may hinder students' development of essential accounting competencies such as judgment, skepticism, and ethical reasoning. Kovari (2025) notes that dependency on AI-generated responses can weaken problem-solving skills and inhibit self-directed learning. To address this, guided use of AI tools must be embedded in pedagogical strategies.

AI in Accounting Research

AI has significantly changed the research process in accounting. Large Language Models (LLMs) like ChatGPT can perform rapid literature reviews, identify theoretical gaps, and assist with drafting scholarly texts (Agarwal et al., 2024). While promising, these capabilities also demand critical oversight to ensure academic rigor.

AI enables the automation of complex data analysis, facilitating advanced research in areas such as audit risk, financial forecasting, and fraud detection (Ballantine et al., 2024; Liu, 2024). Predictive models based on machine learning have been applied to massive datasets, allowing for more nuanced interpretations and timely insights.

Although AI can expedite the research process, Du Toit (2024) questions whether AI-generated research outputs can match the analytical depth of human-authored work. Scholarly integrity must be maintained through rigorous validation, triangulation of sources, and transparent methodology.

Ethical Considerations and Institutional Challenges

The increasing use of AI in academic contexts introduces complex ethical questions that requires attention from educators, administrators, and policymakers. One of the most pressing concerns relates to authorship and the originality of student work. Kovari (2025) highlights growing unease among faculty members regarding the ability to detect AI-assisted submissions. As tools like ChatGPT become more sophisticated in producing grammatically correct and coherent content, distinguishing between human-authored and AI-generated work becomes increasingly difficult. This ambiguity undermines traditional understandings of plagiarism and raises significant challenges in upholding academic integrity. Without clear, enforceable guidelines, students may inadvertently or deliberately cross boundaries, leading to inconsistent disciplinary outcomes and confusion about what constitutes acceptable academic conduct.

To respond effectively to these concerns, institutions should establish transparent and consistent policies outlining the appropriate use of AI tools in academic settings. These policies should not only define misconduct but also provide constructive guidance on ethical engagement with AI. For instance, educators might encourage students to disclose when and

how AI tools were used during the research or drafting process, thus fostering a culture of accountability and critical reflection rather than punishment.

Beyond issues of authorship, the reliability and accuracy of AI-generated content pose additional risks. Chan (2023) warns that language models can produce factually incorrect or misleading outputs, especially in disciplines like accounting that require precision, regulatory compliance, and attention to detail. Because AI systems often lack context-specific understanding, they may offer plausible-sounding but inaccurate information. This becomes particularly concerning when students accept these outputs uncritically, relying on them as authoritative without verification. Educators must therefore play an active role in cultivating students' information literacy, emphasizing the importance of cross-checking AI outputs with primary sources and professional standards.

Equity is another major ethical dimension in the conversation about AI in education. Not all students have equal access to advanced AI tools, or the digital literacy needed to use them effectively. Xu and Babaian (2021) point out that disparities in technological access may exacerbate existing educational inequalities. While some students benefit from premium AI subscriptions and personalized learning support, others may be left behind due to economic, geographic, or institutional barriers. To ensure fairness, universities must invest in infrastructure that enables equitable access to digital tools and establish shared pedagogical frameworks. These initiatives should include training for both students and faculty on the ethical, practical, and cognitive dimensions of AI in education. Without such systemic efforts, the adoption of AI technologies risks reinforcing structural inequalities rather than serving as a vehicle for inclusive innovation.

Conclusion

AI is reshaping accounting education in profound and multifaceted ways. It presents promising opportunities to enhance teaching, personalize student learning, and expand the scope and scale of academic research. Yet, the benefits of AI can only be realized through thoughtful and responsible integration that aligns with the core goals of accounting education—namely, developing critical thinking, professional judgment, and ethical reasoning.

To support these goals, AI tools must function as complements to—not replacements for—learning objectives. Assignments should be purposefully designed to promote reasoning, analysis, and reflective engagement with content, minimizing the likelihood of passive or superficial learning (Hooda et al., 2022). This shift in assessment strategy has led many institutions to adopt process-based evaluations such as oral exams, project portfolios, and in-class case discussions, which are inherently less susceptible to AI misuse and more effective in capturing authentic student competencies (Kovari, 2025).

Equally important is the role of faculty. Effective and ethical AI adoption depends on providing instructors with the knowledge and tools necessary to integrate these technologies meaningfully. Chan (2023) and Xu and Babaian (2021) emphasize the critical need for faculty development programs that address not only the technical use of AI but also its ethical implications and practical constraints. Institutional investment in such support mechanisms is essential for cultivating a culture of responsible innovation.

Ultimately, the future of accounting education lies not in resisting technological advancement but in leading its pedagogical transformation. This requires a sustained commitment to academic integrity, equity, and critical inquiry. As the literature reveals, there is no one-size-fits-all solution, and best practices are still emerging. Continuous reflection, adaptive policy-making, and open dialogue among educators, students, and institutions will be necessary to ensure that AI is leveraged not only effectively but ethically and inclusively.

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