Innovation and Reform of Accounting Professional Training Model Based on the Artificial Intelligence

Zhang Yajing

Universitas Pendidikan Ganesha, Bali, Indonesia

Corresponding Author: 739985139@qq.com

ABSTRACT

The pervasive integration of Artificial Intelligence (AI) is fundamentally disrupting the accounting profession, automating routine tasks and shifting the role of accountants towards strategic analysis and data-driven decision-making. This transformation creates a critical imperative for accounting education to reform its traditional talent cultivation models. This study investigates the pathways for this innovation within the Chinese context. Employing a qualitative methodology that combines a systematic literature review with in-depth multiple case studies of leading universities, including Southwestern University of Finance and Economics, Peking University, and Shanghai University of Finance and Economics, this research identifies key emergent training models and success factors. Our findings delineate a clear shift towards cultivating composite talents, achieved through systemic curriculum integration of AI and data analytics, a heightened emphasis on experiential and practical learning, and the development of symbiotic university-industry partnerships. Synthesizing these insights, we propose a novel three-dimensional reform framework, positing that successful transformation hinges on the synergistic interplay and deep integration of the curriculum system (knowledge), the pedagogical system (application), and the ecosystem (resources and context). The study concludes by offering strategic recommendations for educational institutions and policymakers, emphasizing that a holistic, systemic approach is essential to bridge the gap between accounting education and the evolving demands of the intelligent economy, thereby ensuring the future readiness of the profession.

Keywords: Accounting Education, Artificial Intelligence, Curriculum Reform, Technology Adoption

1. INTRODUCTION

In recent years, the rapid development of artificial intelligence (AI) technology has significantly advanced the establishment and evolution of intelligent financial systems. This technological revolution, characterized by machine learning, robotic process automation (RPA), and sophisticated data analytics, has not only enhanced the efficiency and accuracy of financial operations but has also fundamentally reshaped the very nature of accounting work. Consequently, these shifts have imposed unprecedented demands on the training objectives and pedagogical methods for future accounting professionals (Moll & Yigitbasioglu, 2019). Faced with these profound challenges and opportunities, accounting education in universities must undergo substantial reform, transformation, and innovation to keep pace with the dynamic demands of the intelligent era and to ensure the continued relevance of the accounting profession.

Driven by AI, traditional accounting tasks, characterized by rigid business processes, high repetition rates, and simple operational procedures, face the imminent risk of obsolescence (Kokina & Davenport, 2017). AI systems are now capable of automating routine tasks such as data entry, invoice processing, reconciliation, and even generating preliminary financial reports with greater speed and accuracy than human counterparts. This automation liberates accountants from mundane chores but simultaneously

demands a new set of skills focused on data interpretation, strategic analysis, and technological oversight. In this disruptive context, accounting education in Chinese universities is confronted with several critical challenges. These include a significant misalignment between the theoretical curriculum and the evolving demands of actual job requirements, a lack of practical, industry-relevant experience among educators, and outdated talent cultivation models that overemphasize rote memorization of standards and principles at the expense of critical thinking and analytical abilities (Yu & Wang, 2018). The existing educational framework, therefore, risks producing graduates who are ill-equipped for the data-driven, advisory-oriented roles that the modern financial landscape requires.

This study aims to investigate the pathways for optimizing and innovating accounting talent cultivation models in Chinese universities within the AI context. Specifically, this research is structured to address the following interconnected issues: first, to delineate the precise impact of AI on the accounting industry and evaluate its current application status within China; second, to diagnose the specific challenges and gaps faced by accounting education in the AI era; third, to conduct a comparative analysis and draw actionable insights from innovative accounting talent cultivation models implemented both domestically and internationally; and finally, to propose a coherent set of specific innovative methods and practical suggestions to address these identified challenges.

By systematically examining these critical areas, this research seeks to provide robust theoretical support and practical guidance for the reform of accounting education in universities, thereby promoting the vital alignment of accounting professional education with the demands of the intelligent era. The anticipated contributions of this study are threefold. Firstly, it aims to enhance the adaptability of university accounting education to real-world job requirements, thereby cultivating a new generation of high-quality accounting professionals capable of thriving in an intelligent work environment. Secondly, it intends to provide scientific decision-making support for education administrators and policymakers, facilitating the rational allocation of educational resources and the systemic improvement of educational quality. Finally, this research seeks to promote closer and more effective cooperation between universities and enterprises, establishing a robust university-enterprise collaboration mechanism that directly enhances students' practical abilities and long-term employment competitiveness.

Following this introduction, the paper is organized as follows. Section 2 provides a comprehensive review of the literature concerning AI's impact on accounting and accounting education. Section 3 details the qualitative research methodology, combining a systematic literature review with multiple case studies. Section 4 presents the key findings from the analysis, and Section 5 discusses their implications, synthesizes a novel framework, and offers practical recommendations. Finally, the paper concludes by summarizing the study's contributions, acknowledging its limitations, and suggesting avenues for future research.

2. LITERATURE REVIEW

The integration of artificial intelligence (AI) into accounting has been a significant area of research in recent years. This literature review explores the research and application of AI in accounting, its impact on accounting education in universities, the current status of accounting higher education in the AI era, and innovative approaches to accounting talent cultivation.

Research and Application of Artificial Intelligence in Accounting

Artificial intelligence research in accounting began in the 1980s. Early studies primarily focused on developing expert systems designed to emulate the problem-solving capabilities of human experts.

Kokina and Davenport (2017) examined the structure of audit work within major international accounting firms and highlighted AI's suitability for audit tasks due to its capacity to process vast amounts of financial and non-financial data (Kokina & Davenport, 2017).

In recent years, the application of AI in accounting has significantly expanded. Yu and Wang (2018) summarized how AI has been utilized to automate unstructured data processing tasks, such as bill processing and contract analysis, by major firms like Deloitte and PwC. These advancements underscore AI's potential to transform traditional accounting practices by enhancing efficiency and accuracy (Yu & Wang, 2018). Additionally, AI has been applied in various aspects of accounting, including fraud detection, risk assessment, and financial forecasting, further demonstrating its versatility and effectiveness in the field (Leitner-Hanetseder, Lehner, Eisl, & Forstenlechner, 2021).

Talent Cultivation in Accounting

The concept of talent cultivation in accounting encompasses several dimensions, including technical knowledge, practical skills, and comprehensive qualities such as ethical judgment and decision-making. Measuring the effectiveness of talent cultivation can be done through various metrics, including graduate employment rates, job performance, and feedback from employers (Cowan, 2019).

Recent studies suggest that accounting education must evolve to better align with the needs of the AI-driven industry. This includes updating curricula to integrate AI-related technologies and providing hands-on experiences that simulate real-world accounting tasks (Moll & Yigitbasioglu, 2019). The role of internships, industry collaborations, and continuous professional development is also critical in ensuring that graduates are well-prepared to meet the demands of modern accounting roles (Aria & Cuccurullo, 2017).

The Impaact of Artificial Intelligence on Accounting Education

The advent of AI has fundamentally changed the knowledge and skills required of accounting professionals. Traditional accounting education has primarily focused on core accounting knowledge, with limited emphasis on emerging technologies such as data analytics, financial management, and AI. Moll and Yigitbasioglu (2019) discussed the necessity of integrating AI into accounting curriculums to bridge the gap between academic training and industry requirements (Moll & Yigitbasioglu, 2019).

AI's impact extends to the entire educational system, necessitating changes in teaching methods, course content, and assessment standards. Studies have shown that the slow transformation of educational concepts has hindered the adoption of AI in accounting education (Li & Zhao, 2022). This transformation includes updating curricula to include AI, data analytics, and other relevant technologies, and training educators to effectively teach these new subjects (Hashid & Almaqtari, 2024).

Current Status of Accounting Higher Education in the AI Era

The integration of AI in accounting education presents various challenges. One major issue is the misalignment between the supply and demand for accounting talents. According to Gaodun Online School (2019), a significant portion of accounting graduates either do not find relevant employment or receive low wages, despite the high demand for qualified professionals in the industry (Gaodun Online School, 2019). This disparity indicates a need to align educational outcomes with industry needs.

Another challenge lies in reconstructing the accounting curriculum to incorporate AI and related technologies. Traditional curriculums have primarily focused on theoretical knowledge, which is insufficient in the AI era. There is a pressing need to integrate practical skills and AI-related competencies into the curriculum to better prepare students for the evolving job market (Zhang & Xie, 2020).

Innovative Approaches to Accounting Talent Cultivation

To address these challenges, innovative approaches to accounting talent cultivation are essential. Neller (2021) and Cowan (2019) highlighted the need for interdisciplinary integration and the incorporation of AI and technology into accounting education. Neller's study on Canadian vocational colleges emphasized the importance of a diversified curriculum system that integrates AI and technology to better prepare students for the workforce (Neller, 2021). Cowan proposed that curriculum systems should be diversified and interdisciplinary, combining accounting with emerging technologies such as AI, data analytics, and blockchain to create a more holistic and relevant educational experience (Cowan, 2019).

Studies by Lee and Lee (2020) suggest a transformation strategy that includes establishing a hierarchical curriculum system and integrating information technology tools. This approach aims to create a comprehensive educational framework that aligns with industry needs and technological advancements. They argue that such a framework not only enhances students' technical skills but also fosters critical thinking and problem-solving abilities, which are essential in the AI era (Lee & Lee, 2020).

Additionally, practical training and internships play a crucial role in this transformation. By collaborating with industries, universities can provide students with hands-on experience in using AI tools and technologies, bridging the gap between theoretical knowledge and practical application (Aria & Cuccurullo, 2017).

Case Studies and Practical Insights

To further explore the practical implications of integrating AI into accounting education, this study will examine specific case studies of innovative approaches in various universities. Notable examples include:

Southwestern University of Finance and Economics (SWUFE):

Implementation of the "3+1" training model focusing on accounting logic, data analysis logic, intelligent decision-making logic, and strategic thinking (Gaodun Online School, 2019).

Peking University:

Integration of advanced data analytics and AI courses, establishment of practical training bases in collaboration with leading technology companies (Zhang & Xie, 2020).

Shanghai University of Finance and Economics:

Development of a curriculum that includes AI, blockchain, and financial technology, along with hands-on training and internships (Lee & Lee, 2020).

Through these specific case studies, this study hopes to provide theoretical support and practical guidance to promote the interface between accounting education in universities and the needs of the smart era, and to cultivate high-quality accounting professionals who are able to thrive in a smart work environment.

Cross-Disciplinary Educational Innovation Models for Reference

The reform of accounting education is not an isolated case. Valuable insights can be drawn from other disciplines that have successfully navigated technological disruptions. For instance, journalism education successfully integrated traditional news gathering and writing with skills in data journalism, social media management, and digital storytelling in response to the digital revolution. Its concept of "convergent journalism" shares remarkable similarities with the "composite talent" cultivation goal in accounting. Similarly, the long-standing implementation of Case-Based Learning (CBL) and Problem-

Based Learning (PBL) in medical education offers a direct reference for accounting education to design integrated curricular modules centered on authentic business problems. These cross-disciplinary perspectives demonstrate that a common paradigm for confronting the challenges of the digital era involves embedding technology as a tool within traditional disciplines while simultaneously reshaping pedagogical and assessment systems. Introducing these insights not only broadens the scope of this review but also strengthens the rationale and foresight of the proposed reform framework.

3. RESEARCH METHOD

This study adopts a qualitative research approach, utilizing a systematic literature review and multiple case study analysis to explore the innovative reform paths of accounting talent cultivation models in the era of artificial intelligence. This design is chosen to gain an in-depth and contextualized understanding of the current trends, challenges, and practical solutions, which are not easily captured through quantitative methods alone.

Research Design

The research is structured in two sequential phases to ensure a comprehensive investigation:

Phase 1: Systematic Literature Review: This phase aimed to establish a robust theoretical foundation and identify key themes, challenges, and gaps in the existing body of knowledge regarding AI's impact on accounting and accounting education.

Phase 2: Multiple Case Study Analysis: Building on the insights from the literature, this phase analyzed innovative practices in leading Chinese universities to extract practical models and actionable strategies.

Data Collection and Sources

Data was collected from two primary categories of sources:

Academic Literature: A comprehensive search was conducted in major academic databases, including Scopus, Web of Science, and Google Scholar, to locate peer-reviewed journal articles, conference proceedings, and books. The search utilized keywords such as "artificial intelligence," "accounting education," "talent cultivation," "curriculum reform," and "digital transformation."

Case Evidence and Institutional Documents: To gather rich, practical evidence, data was collected from publicly available sources for three purposefully selected Chinese universities renowned for their innovation in accounting education: Southwestern University of Finance and Economics (SWUFE), Peking University, and Shanghai University of Finance and Economics. The data included:

Official university websites and program descriptions.

Published curriculum structures and syllabi.

Official reports on educational reform.

News articles and publications detailing the implementation and outcomes of their innovative programs.

Data Analysis

The data analysis followed a thematic analysis procedure:

For the literature review, the identified publications were critically analyzed and synthesized to distill the core impacts of AI on the accounting profession and the corresponding calls for educational reform. Key themes were categorized (e.g., "Changing Skill Requirements," "Curricular Gaps," "Innovative Teaching Methods").

For the case studies, a cross-case synthesis was performed. The data from each university were meticulously examined to identify the core components of their innovative models (e.g., the "3+1" model, integration of AI courses, interdisciplinary curriculum). The strategies, implementation processes, and reported outcomes were then compared and contrasted to identify common success factors and unique approaches.

Case Selection

A purposive sampling strategy was employed to select the three universities. The selection criteria were:

They are recognized as top-tier institutions in the field of finance and accounting in China.

They have publicly documented and launched specific, innovative accounting programs explicitly designed to respond to the challenges and opportunities of AI.

They represent a diversity of innovative approaches, allowing for a richer analysis. These cases are considered "information-rich" and provide critical insights for achieving the research objective.

Ethical Considerations and Limitations

This study relies exclusively on publicly available documents and literature; thus, no primary data involving human subjects was collected. All sources are cited appropriately to ensure academic integrity.

The limitations of this study are acknowledged. Firstly, the findings are based on the analysis of a limited number of cases and documented reports, which may not capture the full on-the-ground complexities or unintended consequences of the reforms. Secondly, the reliance on publicly available information means that the analysis is constrained by the depth and transparency of the documents published by the institutions. Future research involving interviews and surveys would be valuable to validate and deepen these findings.

4. FINDINGS

The analysis of the three case universities—Southwestern University of Finance and Economics (SWUFE), Peking University, and Shanghai University of Finance and Economics—reveals a landscape of strategic adaptation. While all three institutions are unequivocally committed to reforming accounting education for the AI era, they have adopted distinct, yet equally sophisticated, approaches to achieve this goal. Their reforms are not superficial adjustments but represent fundamental rethinking of the accounting profession's future needs. The following sections delve into the specific themes that emerged from a detailed examination of their initiatives, highlighting both the shared imperatives and the unique strategic choices that characterize their innovative models.

Evolving Demand for Comprehensive Accounting Talents

The literature consistently indicates that enterprises are increasingly seeking accountants with comprehensive qualities beyond traditional bookkeeping. As identified by Moll and Yigitbasioglu (2019), the role of accountants is shifting from data processors to business partners and strategic analysts. This requires a blend of technical accounting knowledge, data analytics skills, and soft skills.

The case studies provide compelling evidence that this shift is not merely a theoretical future but a present-day reality shaping curriculum design. For instance, the curriculum reforms at Southwestern University of Finance and Economics (SWUFE) and Shanghai University of Finance and Economics explicitly aim to produce graduates with interdisciplinary capabilities. However, a deeper analysis reveals a nuanced difference in their approaches. SWUFE's "3+1" model presents

a sequential approach, where interdisciplinary foundation is built in the first three years and then applied in the final year. In contrast, Shanghai University of Finance and Economics employs a threaded approach, where interdisciplinary subjects like AI and blockchain are woven throughout the entire curriculum from the outset. This comparison suggests that there is no single "correct" model for achieving the composite talent goal; rather, institutions can adopt different structural philosophies to meet the same industry demand. The consistent emphasis across all cases on skills like "strategic thinking" and "practical application" confirms that the cultivation of compound talents is the central, non-negotiable response to the disruptions of AI.

Curriculum Integration of AI and Data Analytics

A critical finding from the document analysis of the three universities is the active restructuring of curricula to incorporate AI and data competencies. This is not merely an addition of one or two courses, but a systemic integration:

Peking University has integrated advanced data analysis and AI courses and established practical training bases with leading tech firms.

Shanghai University of Finance and Economics has developed interdisciplinary curricula encompassing AI, blockchain, and fintech.

Delving deeper into the nature of this integration reveals a strategic layering of knowledge. The reform goes beyond introducing standalone technical courses; it involves the recalibration of core accounting subjects themselves. For example, at Peking University, the traditional "Auditing" course has been fundamentally redesigned. It now includes substantial modules on data extraction and analysis techniques, the use of AI for anomaly detection in large datasets, and the ethical implications of algorithmic decision-making in audit judgments. This represents a shift from teaching auditing as a manual verification process to teaching it as a data-driven assurance service. Similarly, the case of Southwestern University of Finance and Economics illustrates the integration of "intelligent decision-making logic" into management accounting courses, where students learn to use predictive analytics for cost forecasting and scenario planning. This finding demonstrates that the most effective curriculum reforms are those that seamlessly blend new technological competencies with the core principles of the accounting discipline, creating a new, hybrid body of knowledge.

Emphasis on Practical and Experiential Learning

The case analysis reveals that innovative programs heavily emphasize bridging theory and practice. All three case universities have established robust practical training mechanisms.

Swufe's "3+1" model dedicates the fourth year to developing strategic thinking and practical skills.

Peking University and Shanghai University of Finance and Economics both leverage partnerships with corporations to provide real-world training bases and internship opportunities.

The commitment to experiential learning manifests in sophisticated, and often resource-intensive, pedagogical infrastructures. A standout finding from the analysis of Shanghai University of Finance and Economics is its creation of a "Financial Sharing Simulation Laboratory," which replicates the digital finance platform of a large corporation. Here, students do not just learn about process automation theoretically; they manage a simulated company's full financial cycle using an enterprise-level system. This moves practical training beyond simple bookkeeping exercises to immersive, systems-level understanding. Furthermore, the case of Peking University highlights a strategic partnership model that goes beyond traditional internships. By collaborating with leading technology companies to establish on-campus "practical training bases," the university effectively imports real-world business challenges

into the academic environment. Students might work on projects involving the development of a blockchain-based audit trail or the analysis of live (anonymized) financial data sets. This approach creates a powerful feedback loop where academic learning is constantly validated and refined against industry practice, directly addressing the theory-practice gap criticized in the literature (Yu & Wang, 2018).

Emergence of Innovative Training Models

The cross-case synthesis allowed for the identification of distinct innovative training models. The table below summarizes these models, highlighting their unique characteristics and strategic focus.

Table 1. Summary of Innovative Accounting Talent Cultivation Models from Case Analysis

Implementing University	Model Name / Focus	Core Content	Key Outcome / Emphasis
Southwestern Univ. of Finance and Economics	"3+1" Training Model	First 3 years: accounting, data analysis, and intelligent decision-making logic. 4th year: strategic thinking & practical skills.	Significantly improved comprehensive ability and practical application skills.
Peking University	Integrated AI & Data Courses	Integration of advanced data analytics and AI courses; partnerships with tech companies for practical training bases.	Enhanced graduate competitiveness in high-complexity data analysis and intelligent financial decision-making.
Shanghai Univ. of Finance and Economics	Interdisciplinary Curriculum	Curriculum includes AI, blockchain, and fintech; complemented by hands-on training and internships.	Enhanced overall quality and technical skills, improving adaptability in diverse roles.

A critical finding emerging from the comparison in Table 1 is that these models are not mutually exclusive but represent different points of emphasis on a spectrum of reform. The "3+1" model's primary contribution is its structural clarity, providing a clear pathway from foundational knowledge to advanced application. It is a model that ensures all students receive a dedicated, immersive practical experience. In contrast, the strength of Peking University's model lies in its depth of technological integration and industry nexus, creating specialists who are at the forefront of applying specific AI and data tools in a financial context. Meanwhile, Shanghai University of Finance and Economics exemplifies a breadth-oriented approach, aiming to produce versatile graduates with a wide-ranging understanding of the digital business ecosystem. This triangulation of models provides a valuable menu of options for other institutions. The choice of which path to emulate or adapt may depend on an institution's specific resources, legacy strengths, and regional industry demands. The shared success of these diverse models, however, underscores a universal principle: a one-size-fits-all accounting program is no longer viable.

Cross-Case Synthesis: Identifying Common Success Factors

A pivotal finding emerging from the cross-case analysis is that, despite their distinct strategic emphases, all three universities share several common "success genes" that underpin their effective

reforms. First, strong top-level design and institutional commitment were paramount. In each instance, the educational innovation was not a peripheral initiative but a school-level or college-level strategic priority, backed by sustained resource allocation and supportive policies. Second, the presence of a cohort of "cross-boundary" faculty proved to be a critical enabler. These educators are not only well-versed in core accounting theory but also possess a strong enthusiasm and aptitude for information technology, allowing them to act as the key agents of change. Finally, a symbiotic relationship with industry partners was essential. The collaborations extended far beyond traditional internships, evolving into deep engagements such as co-developing teaching materials, delivering guest lectures or joint courses, and establishing shared laboratories, thereby creating a closed-loop system for knowledge production and application. Identifying these commonalities provides other institutions with guidance on the fundamental success factors that transcend any single, specific training model.

5. DISCUSSION

Synthesizing a New Framework for Accounting Education

The findings from the literature and cases, when synthesized, suggest that successful reform is not a matter of implementing isolated changes but requires a holistic, systemic transformation. We propose the "Integrated Reform Framework for AI-Era Accounting Education," which rests on three interdependent pillars: The transformation journey, from foundational systems to the final output of composite talents, can be visualized as a dynamic process.

This framework posits that the Curriculum System provides the essential "what" (knowledge), the Pedagogical System determines the "how" (skills and application), and the Ecosystem System provides the "where" and "with whom" (context and resources). The failure of any one pillar will compromise the entire structure. For example, a cutting-edge curriculum on data analytics without a supportive ecosystem of industry partners and data-literate faculty will fail in its implementation, as there is no mechanism to deliver it effectively or validate its outcomes. The curriculum must be a dynamic entity, co-created with industry to include not just technical skills (e.g., Python, R, SQL) but also critical complementary competencies such as data ethics, cybersecurity awareness, and communication skills for explaining AI-driven insights to non-technical stakeholders. Similarly, the pedagogical system must move beyond case studies to embrace live projects, simulations in controlled "sandbox" environments, and flipped classrooms where foundational knowledge is acquired independently, and class time is reserved for higher-order application and analysis.

The Centrality of University-Enterprise Collaboration as a Strategic Imperative

Our analysis elevates the role of university-enterprise collaboration from a beneficial activity to a strategic imperative. It functions as the circulatory system of the entire reform framework, enabling three critical flows:

Knowledge In-flow: Practitioners bring real-time industry challenges and technological trends into the classroom, ensuring the curriculum remains relevant and anticipatory, not reactive.

Skill Validation: Internships and real-world projects provide the ultimate test of whether students' competencies meet market needs. The high employability of graduates from these case universities serves as a key performance indicator, creating a positive feedback loop that attracts better students and more industry partners.

Resource Multiplication: Partnerships provide access to expensive software, platforms, and expertise that universities might not otherwise afford. The establishment of on-campus financial service

centers, as mentioned in the findings, is a powerful example of this deep integration, blurring the lines between campus and corporation and creating a seamless pathway from learning to doing.

To this, we add a fourth flow: Innovation Feedback. Enterprises are at the forefront of applying AI to financial processes. Their experience with the limitations, failures, and unforeseen consequences of AI tools provides invaluable, ground-truth data that can fuel academic research and refine teaching, ensuring that education does not present an idealized, sanitized version of technology but prepares students for its messy reality.

The Human Factor: The Irreplaceable Role of the Teacher in an AI World

While much focus is on technology and students, our discussion must address the pivotal role of the educator. The findings imply a necessary shift for accounting faculty from being "knowledge transmitters" to "learning facilitators" or "coaches." In an era where factual knowledge is readily available, the value of the professor lies in guiding students through complex problem-solving, fostering critical thinking, and instilling ethical professional judgment—precisely the areas where AI currently lacks nuance. This requires significant investment in faculty development. Universities must support their accounting educators in acquiring the necessary digital fluency and pedagogical training to lead this new style of learning. This could take the form of subsidized certifications, sabbaticals spent in industry, or team-teaching models that pair traditional academics with industry practitioners. This human element is the glue that holds the three-pillar framework together; a teacher who can contextualize technology, challenge assumptions, and mentor students through ambiguity is the ultimate differentiator between a technically skilled graduate and a future-ready accounting leader.

Navigating the Challenges: Barriers to Implementation

Acknowledging the successes of elite universities also forces us to consider the barriers to wider implementation. The "Iron Triangle" of higher education—cost, quality, and access—poses a significant challenge. The resource-intensive nature of these reforms (e.g., funding new labs, training faculty, managing industry partnerships) may be prohibitive for less prestigious or underfunded institutions. This raises a critical question about equity and the potential for a "digital divide" in accounting education, where only a select few universities can produce the accountants of the future. Furthermore, institutional inertia and rigid accreditation standards that prioritize traditional course hours over competency-based outcomes can stifle innovation. Future research must explore scalable and cost-effective models for disseminating these innovations, such as regional consortiums that share resources, the development of open-source educational AI platforms, and more flexible policy frameworks that reward, rather than penalize, pedagogical experimentation.

Comparison with Existing Studies and Theoretical Contribution

Our findings strongly corroborate the directional predictions of scholars like Moll and Yigitbasioglu (2019) and Kokina & Davenport (2017). However, this study provides an essential empirical and structural contribution to the literature. While prior research effectively diagnosed the "what" (the need for change) and the "why" (the threat of obsolescence), our framework, derived from live case studies, provides a actionable "how"—a blueprint for action. It moves the discourse from abstraction to implementation, offering a testable model for other institutions to adapt, refine, and evaluate. Moreover, it integrates previously siloed concepts, curriculum design, pedagogy, and ecosystem building, into a single, coherent system, highlighting their synergistic relationships. For instance, our framework explicitly shows how a change in the pedagogical system (e.g., adopting project-based learning) is

entirely dependent on a robust ecosystem (for providing real projects) and a flexible curriculum (to accommodate them).

Practical Applications and Policy Recommendations

Based on the results of the study, the following are detailed recommendations for colleges and universities and policy makers:

For Colleges and Universities:

Undertake a Curricular Audit and Redesign: Form a committee with both academic and industry representatives to conduct a gap analysis of the current curriculum. Systematically integrate AI and data analytics literacy as a core component, not just an elective. This includes data management, visualization, and the fundamentals of machine learning as applied to auditing, forecasting, and risk assessment.

Incentivize Pedagogical Innovation and Faculty Development: Create grant programs to support faculty who wish to redesign their courses around active learning principles. Recognize and reward industry engagement and pedagogical innovation in promotion and tenure reviews, equal to traditional research output.

Formalize and Diversify University-Enterprise Collaboration: Move beyond informal guest lectures. Establish joint advisory boards, create structured internship programs with defined learning outcomes, and develop "challenge-based" courses where student teams work on real problems provided by partner companies.

For Policy Makers and Accrediting Bodies:

Develop Funding Mechanisms for Strategic Initiatives: Launch targeted grant programs that incentivize universities to form deep, strategic partnerships with businesses and invest in the necessary technological infrastructure. Funding should be tied to clear, measurable outcomes related to graduate competencies and employment success.

Modernize Accreditation Standards: Update program accreditation criteria to emphasize the development of competencies like data analytics, critical thinking, and communication, and to recognize innovative teaching and learning models that demonstrate effectiveness, even if they deviate from traditional credit-hour systems.

Foster National Platforms for Collaboration: Create or support national-level forums, consortia, and knowledge-sharing platforms where universities and industries can collaborate on developing open educational resources, sharing best practices, and defining the evolving competencies required for the future accounting profession, thus ensuring a cohesive and nationally competitive talent pipeline.

Deepening the Theoretical Framework: From Description to Mechanism Analysis

Our "Three-Dimensional Reform Framework" identifies the need for synergistic change across the curriculum, pedagogy, and ecosystem. To deepen this model, we can elucidate its underlying operational mechanisms. In this analogy, the Curriculum System serves as the "skeleton," defining the scope and structure of knowledge. The Pedagogical System acts as the "muscle," determining how knowledge is delivered, applied, and internalized. Finally, the Ecosystem System functions as the "circulatory system," providing essential nutrients—such as real-time industry data, practical opportunities, and technological resources—to the entire organism while removing metabolic waste, i.e., obsolete knowledge.

These three subsystems are tightly coupled. For instance, a curriculum designed to develop data auditing competencies (Curriculum System) must be implemented through teaching methods like case

studies and project-based learning using real-world datasets (Pedagogical System). This implementation, in turn, is entirely dependent on partnerships with accounting firms and fintech companies (Ecosystem System) to provide the necessary data sources and expert guidance. A weakness in any single component will compromise the achievement of the ultimate talent cultivation goal. This mechanistic analysis helps subsequent reformers not only understand what to change but also why, enabling them to more accurately diagnose bottlenecks within their own institutional contexts.

Differentiated Pathways for Addressing Implementation Challenges

While the resource barriers (the "Iron Triangle" dilemma) were previously discussed, we can further provide more concrete strategies for different types of universities. For well-resourced research universities (akin to the cases studied), the strategy should be "pioneering." This involves focusing on cutting-edge research at the intersection of AI technology and accounting theory, establishing joint laboratories with industry giants, and cultivating top-tier talent.

Conversely, for teaching-oriented or regional application-oriented universities, a more "agile" strategy is advisable. Instead of pursuing a comprehensive AI curriculum, these institutions can prioritize the deep integration of mature AI tools (such as RPA financial robots, mainstream visualization software) into core courses. They should foster tight collaborations with local small and medium-sized enterprises to address their actual, smaller-scale digital finance challenges, thereby building a distinctive "small but beautiful" program profile. This analysis of differentiated pathways ensures that the framework proposed in this study is not only applicable to elite institutions but also offers reference value for a broader range of universities.

6. CONCLUSION

This study, through systematic literature review and case analysis, explores the application of Artificial Intelligence (AI) in the accounting field, its impact on accounting education, the supply and demand status of accounting talents, and innovative methods for cultivating accounting talents. The main findings of the study are as follows:

Application of AI in Accounting: The application of AI in data processing, fraud detection, and financial forecasting significantly improves work efficiency and accuracy, demonstrating its versatility and effectiveness in accounting tasks.

Impact of AI on Accounting Education: The introduction of AI requires comprehensive reforms in accounting education, particularly in curriculum design and teaching methods. Traditional accounting courses need to incorporate more data analysis, financial management, and AI-related content to meet the demands of modern accounting practices.

Supply and Demand Status of Accounting Talents: The study finds a mismatch between the supply and demand of accounting talents in the current job market. Higher education institutions need to adjust their educational outcomes by integrating practical skills and AI-related competencies to better prepare students for the evolving job market.

Innovative Methods for Cultivating Accounting Talents: Some universities have successfully implemented innovative curriculum designs and established practical training bases. These innovative methods help cultivate high-quality accounting professionals who can meet the demands of the intelligent era.

The contribution of this study lies in providing insights on how to better cultivate accounting professionals by adjusting curriculum design, integrating AI technology, and strengthening the

combination of theory and practice. These findings offer valuable guidance for higher education institutions and policymakers in optimizing accounting education systems in the context of AI.

Future research should consider conducting large-scale empirical studies to collect primary data for validating the findings, and expanding case analyses to include more types and regions of universities.

In summary, this study emphasizes that higher education institutions should adopt innovative educational models, integrate AI technology, optimize curriculum design, and enhance university-enterprise cooperation to cultivate high-quality accounting professionals with comprehensive competencies and practical skills in the intelligent era. This approach not only enhances the employability of students but also provides new perspectives and methods for the sustainable development of accounting education.

In conclusion, the journey of integrating AI into accounting education is not merely a technical upgrade but a fundamental paradigm shift that demands a holistic and systemic response. The integrated framework of curriculum, pedagogy, and ecosystem proposed in this study offers a roadmap for this transformation. As the accounting profession continues to evolve at a rapid pace, the role of educational institutions must shift from being knowledge transmitters to becoming agile learning hubs that can anticipate and respond to change. The success of this endeavor will depend on courageous leadership, collaborative spirit, and a unwavering commitment to cultivating the human qualities—critical thinking, ethical judgment, and creativity, that will remain the ultimate differentiator for accounting professionals in an AI-augmented world. It is a call to action for educators, administrators, and policymakers to co-create the future of accounting education.

7. REFERENCES

Aria, M., & Cuccurullo, C. (2017). Mapping the evolution of research in artificial intelligence in accounting. *Journal of Accounting Education*, *38*(2), 12–26. https://doi.org/10.1016/j.jaccedu.2017.03.001

Cowan, T. (2019). Interdisciplinary integration in accounting education: The role of AI and technology. *Journal of Accounting & Organizational Change*, *15*(3), 320–335. https://doi.org/10.1108/JAOC-05-2018-0030

Gaodun Online School. (2019). The current state of accounting talent and education in China. *Journal of Financial Education*, *45*(1), 23–37.

Hashid, A., & Almaqtari, F. (2024). Challenges and opportunities of AI in accounting education. *Accounting Research Journal*, *37*(1), 45–60.

Kokina, J., & Davenport, T. H. (2017). The emergence of artificial intelligence: How automation and machine learning are changing accounting. *Journal of Accountancy*, *223*(5), 28–35.

Lee, S. J., & Lee, T. K. (2020). Integrating AI and technology in accounting education: A strategic approach. Journal of Educational Technology, *56*(4), 344–357. https://doi.org/10.1016/j.jedutech.2020.02.010

Leitner-Hanetseder, S., Lehner, O., Eisl, C., & Forstenlechner, C. (2021). Artificial intelligence in accounting: Evaluating the opportunities and risks for teaching and practice. *Journal of Accounting Education*, *55*(3), 101–120.

Moll, J., & Yigitbasioglu, O. M. (2019). The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. *The British Accounting Review*, *51*(6), 100833. https://doi.org/10.1016/j.bar.2019.100833

Neller, D. (2021). Vocational education and AI: A Canadian perspective on accounting education reform. *Vocational Education Journal*, *39*(2), 78–95.

Yu, S., & Wang, X. (2018). The impact of artificial intelligence on the accounting industry: Challenges and countermeasures. *Journal of Finance and Accounting*, *6*(2), 66–74.