

Research on teaching reform of accounting information system under the background of big intelligence and cloud

Ximing Zhan¹, Huanhuan Xu^{2,*}

1 School of Management, Beijing Union University, Beijing, 100101, China, hgtximing@buu.edu.cn

2 School of Management, Beijing Union University, Beijing, 100101, China, haunhaunxu02@163.com

*Corresponding author email: haunhaunxu02@163.com

Abstract

This paper explores the teaching reform of the Accounting Information System course in the context of Big Data, Intelligence, Mobile Internet, and Cloud Computing ("Big Data & Smart Cloud"). It analyses the challenges of traditional curriculum design in adapting to evolving financial industry demands, particularly the integration of digital technologies and professional ethics. The study proposes reforms in three key areas: embedding intelligent finance modules (e.g., financial robot applications) into teaching content, adopting problem-oriented and scenario-based teaching methods, and implementing a process-focused assessment system. By integrating ideological and political elements into professional education, the reform aims to cultivate accounting professionals with both technical proficiency and ethical awareness, capable of addressing big data challenges in rural ecotourism and other modern industries. Empirical results show enhanced student engagement and practical skills through case studies and industry expert involvement, highlighting the importance of interdisciplinary and technology-driven curriculum innovation.

Keywords:

Accounting Information System; Big Data & Smart Cloud; Teaching Reform; Professional Ethics Integration

1 Background and Significance of Research

1.1 Research Background

Accounting Information Systems, a core course in accounting education, is an interdisciplinary program combining theoretical foundations with practical applications and technical expertise. Through this curriculum, students systematically understand the architecture and functionalities of accounting information systems (Huimin & Guomin, 2020). They learn to apply contemporary electronic and IT technologies to address accounting information processing challenges in computerized environments, guided by fundamental accounting theories and methodologies. The course utilizes the Yonyou ERP system as its foundation, covering essential subsystems including system management, accounting processing, report generation, procurement

& accounts payable, sales operations, and accounts receivable management (Polimeni & Burke, 2021). This course covers core components including the payroll management subsystem and fixed asset management subsystem, along with their fundamental program architectures, data workflows, and functional modules. Through this curriculum, students will acquire essential concepts and theories of accounting information systems, gain proficiency in financial data processing operations, and establish a solid foundation for advanced studies in specialized fields and future careers in finance (Tawfik & Elmaasrawy, 2023).

In the era of big data, intelligent transformation, mobile internet, and cloud computing, corporate financial processes and roles have undergone significant changes (Guragai et al., 2017). Cashiers and bookkeepers are being centralized while accounting responsibilities are decentralized, with accountants' functions evolving from basic calculations to overall enterprise performance management (Sledgianowski et al., 2017). Accountants now face challenges in analysing and processing big data. Currently, university courses on Accounting Information Systems still rely on platforms like Yonyou ERPU8 or Kingdee K3 accounting software (Dalwai et al., 2021). This confines students to repetitive practice of the entire accounting cycle—filling out vouchers, reviewing documents, bookkeeping, end-of-period processing, and report generation—without keeping pace with modern business development needs. If the Accounting Information Systems course (Massey & Van Hise, 2009). The teaching has been sticking to the old rules, which will cause the long-term separation between theoretical teaching and practical teaching of accounting information talents training, and fail to meet the requirements of accounting talents training goals in the era of "big intelligence, mobile and cloud".

Therefore, this project is grounded in the evolving trends of accounting informatization under the "Big Data, Intelligence, Mobility, and Cloud Computing" (BIMC) framework (Chen et al., 2019). By addressing both societal and corporate needs through curriculum reforms in Accounting Information Systems, we aim to enhance students' practical skills, data analysis capabilities, and innovation capacities (Mahalingam, 2024). This initiative equips students with comprehensive analytical proficiency in accounting information, effectively tackling challenges like fragmented data and delayed decision-making. Through integrating accounting practices with business operations, we strive to improve information quality and relevance, providing managers and investors with more timely and actionable decision-support tools (Handoyo, 2024). The curriculum reform and hands-on training will ultimately empower students to. This program cultivates professionals with dual competencies: mastering core accounting information systems while understanding their evolution and the operational mechanisms of financial robots (Yan & Dong, 2025). Students will develop proficiency in using financial software for corporate accounting tasks, comprehend intelligent finance design principles, and skilfully apply Excel systems to handle practical accounting operations (Ng, 2023). Graduates will emerge as specialized talents in smart finance, combining theoretical knowledge with strong hands-on capabilities (Iverson & Colky, 2004).

1.2 Research Significance

This research project, grounded in the context of the Big Data, Intelligence, Mobility, and Cloud Computing era, explores innovative teaching models for accounting informatization courses that align with contemporary development needs. Cantered on the curriculum reform of Accounting Information Systems, it proposes comprehensive measures to enhance teaching effectiveness through systematic analysis of current educational practices. The strategies encompass: strategically designing course content, innovating instruc-



tional methodologies, refining assessment systems, deeply integrating ideological-political elements, and expanding multi-platform applications (Trigo et al., 2016). These initiatives aim to elevate the pedagogical impact of accounting information systems courses while strengthening students' practical application skills and problem-solving capabilities in digital accounting environments (Sonnenberg & Vom Brocke, 2014).

Through professional course instruction, we effectively design and implement teaching objectives, content, methods, and delivery platforms (Kastberg & Siverbo, 2013). By providing in-depth explanations of specialized knowledge and exemplary cases, we highlight the moral education dimension while leveraging the value-embedded and value-guiding functions of professional courses (Hwang & Cruthirds, 2017). This approach organically integrates foundational professional knowledge with ideological-political elements, emphasizing both talent development and life value cultivation. The educational process nurtures students' comprehensive competencies, fosters correct worldviews and values, and ultimately enhances the effectiveness of professional education (Chornous et al., 2021).

2 The content and ideas of the project research

The development philosophy of the Accounting Information Systems course is "cantered on enhancing teaching quality, grounded in innovation and entrepreneurship education, and focused on cultivating applied talents through pedagogical reform." This initiative aims to establish the course as a distinctive program that embodies innovative educational features and advanced teaching standards. By referencing top-tier accounting information systems curricula and cutting-edge methodologies, we will continuously refine the instructional framework, update course content, upgrade laboratory facilities, strengthen practical training components, and innovate experimental teaching models (Zhang et al., 2025; Zhang & Zhao, 2022). Furthermore, we will fully integrate course resources, enhance resource development and share mechanisms, actively implement online instruction, and create an open, interactive, and collaborative learning environment. By adopting a flexible teaching model that accommodates students' diverse learning needs and individualized requirements, we aim to enhance educational quality (Boritz & Carnaghan, 2003). We will develop comprehensive curriculum frameworks and training systems, creating complete instructional resources including syllabi, case studies, multimedia courseware, exercises, and reference materials (Ramesh et al., 2025). Leveraging internet technologies, we will expand online course resources while exploring innovative approaches to integrate classroom instruction with digital pedagogy. This strategy effectively addresses the challenge of balancing extensive learning content with limited class hours, thereby boosting students' motivation and engagement in the learning process (Al-Badi & Khan, 2022).

2.1 The main content of the project research

2.1.1 Curriculum teaching content reform

In the traditional Yonyou ERPU8 application platform, intelligent financial modules are embedded into core teaching components including general ledger, reporting systems, fixed assets management, compensation systems, and accounts receivable/ payable systems. The curriculum incorporates advanced content on financial robot applications and development, enabling students to master data collection mechanisms and operational workflows for financial robots (Geng et al., 2021). This program equips learners with expertise in

requirements analysis, process design, and functional component development of financial robot software. It cultivates practical competencies in enterprise implementation of financial robots, customized system design based on business needs, and software-driven financial robot development. Key embedded modules include (Wang et al., 2016):

Reimbursement Business Robot. By analysing the operational activities, runtime environment, workflow, and data rules of the reimbursement business robot, we gain familiarity with the characteristics of expense reimbursement processes under financial automation models and adjustments to financial accounting regulations (Simmons & Chi, 2012). Through hands-on operation of the reimbursement business robot, we explore the logical construction and implementation techniques of "different combinations of reimbursement business elements and template vouchers" in financial robot design for reimbursement scenarios, including operational steps and practical skills (Zhang et al., 2023).

Banking Business Robots. Through learning the operational activities and working environment of banking business robots, as well as observing their work processes, students will become proficient in applying financial robot tools to handle routine, standardized banking operations for cashiers. This enables them to master the working principles and data correlation logic of financial robots within banking scenarios (Zeide, 2017).

By tracking and collecting the latest academic achievements both domestically and internationally, we actively conduct research on cutting-edge issues in accounting information systems. We promptly integrate teaching reform outcomes and the latest disciplinary developments into our curriculum, while updating course content based on practical feedback and adjusting the weight of instructional materials appropriately. Through theoretical instruction, students gain a solid understanding of fundamental accounting information system knowledge and theories, developing proper accounting information thinking and applying what they learn to build a strong theoretical foundation for their future careers (Wu, 2021). For applied teaching components, we employ case-based learning and discussion-oriented approaches, emphasizing practical application. The teaching content is constantly updated to meet the reality of the era of big intelligence, mobile and cloud and the requirements of employers for professional skills. Through simulation experiments and organizing students to participate in the National College Enterprise Value Creation Competition, students' professional skills are cultivated.

2.1.2 Reform and innovation of teaching methods and means

Guided by problem-solving principles and driven by practical tasks, the teaching approach employs role-playing and scenario-based simulations. The accounting information system laboratory course has been redesigned with a problem-oriented framework, structured around a cohesive instructional process: "task assignment → hands-on practice → problem identification → analysis & resolution → principal synthesis → report preparation". This methodology prioritizes student-centred learning, actively engaging learners through interactive experiments. By implementing both in-class and out-of-class assignments, it cultivates critical thinking skills while enhancing students' problem-solving capabilities (Misra, 2020).

Incorporating scenario-based simulations into teaching methodologies, instructors design practical training modules by grouping students according to class size. Each 5-6 member team simulates a business operation, managing corporate accounting systems. Roles include Accounting Manager, General Ledger Accountant,



Cashier, Purchasing Supervisor, Sales Manager, and Asset Management Specialist. Through collaborative role-playing and peer evaluations, students experience different professional roles, which not only boosts learning engagement but also develops decision-making skills while encouraging self-discovery of challenges (Cano-Parra et al., 2013).

We actively explore the integration of industry experts into academic programs. By inviting accounting information specialists and seasoned corporate executives to deliver practical lectures and facilitate knowledge exchange, we leverage campus organizations such as the Financial Innovation Club and Accounting Association to organize diverse professional competitions at multiple levels. These initiatives help students transform classroom learning into specialized competencies. Students are encouraged to participate in national competitions including the Ministry of Education's Accounting Teaching Steering Committee's National College Enterprise Value Creation Competition and Beijing University Students 'ERP Management Accounting Application Decision-Making Contest. Through simulated business operations, these programs effectively enhance students' comprehensive capabilities and innovation-entrepreneurship skills. Additionally, students are organized to join the BRICS Competition and other industry events. The fifth National College Enterprise Value Creation Competition won the national first prize; students were organized to participate in the National College Undergraduate Accounting Skills Competition and won the national first prize (Tweedie et al., 2013).

We actively implement diverse teaching methodologies and tools to deepen educational reforms, expanding the application of case-based instruction, multimedia teaching, and online learning. When teaching fundamental theories and methods of accounting information systems, students are required to closely follow current hot topics in China's accounting information field. This approach emphasizes integrating theory with practice, encouraging them to regularly collect and analyse classic corporate cases. Focusing on cultivating practical application skills, we highlight students' central role in learning activities while emphasizing teacher-student interaction to fully engage their enthusiasm, initiative, and creativity (Hoic-Bozic et al., 2008). Various teaching methods are employed, including organizing case analyses and group discussions to enhance learning outcomes. The curriculum encompasses multimedia classroom instruction and online teaching. Through cloud-based platforms like Lanmo Cloud Classroom, we extend learning beyond physical classrooms by creating interactive digital teaching environments for teacher-student communication. This facilitates real-time Q&A sessions to address students' academic challenges, while cultivating self-directed learning habits and problem-solving skills with reflective analysis. We guide students in understanding accounting practices for emerging business models, broaden their knowledge horizons, stimulate innovative thinking, and help them stay ahead of the times (Rastogi, 2003).

2.1.3 Take value as the guide and dig deep into the elements of ideological and political courses

In the current training of accounting professionals, there is a primary focus on cultivating technical skills while relatively neglecting value education beyond professional foundations. Amidst the prevailing trend of innovation and entrepreneurship, nurturing entrepreneurial spirit has become particularly crucial. Therefore, in the cultivation of accounting professionals, it is essential to emphasize not only professional knowledge but also instil humanistic values such as entrepreneurial thinking. To align with market demands and educational objectives, the "Accounting Information Systems" course integrates ideological education emphasizing "pa-

triotic sentiment," "compliance with laws and regulations," "honesty and integrity," "rule of law awareness," and "strictness." The education content such as "seeking truth" should be established to establish a correct attitude towards people, doing things and seeking knowledge, to cultivate professional talents with both virtue and talent (Wang & Ma, 2024).

Through meticulous development of teaching content, instructional design, learning modules, and case studies, this program integrates China's national conditions with policy interpretations in the financial sector, accounting industry trends, and risk prevention education. By leveraging the unique professional ethics of accounting work as a foundation, it subtly incorporates core socialist values, accounting ethics, legal awareness, and social responsibility into the curriculum. This approach guides students to cultivate socialist core values, develop strong moral integrity and social responsibility, embrace positive life aspirations; foster legal consciousness, civic awareness, and scientific attitudes; uphold professional ethics and ethical standards; and ultimately achieve comprehensive development. With a sense of responsibility and rigorous working attitude, we explore the teaching mode of mutual penetration between professional theory and ideological and political content, so as to realize the purpose of knowledge transmission, ability enhancement and value guidance (Tang & Zhang, 2022).

2.1.4 Optimize the course assessment method

The Accounting Information Systems course differs from other accounting majors in its focus on developing practical operational skills. With the continuous advancement of information technology and its widespread application in the accounting industry, the curriculum content and structure of this course are undergoing constant evolution. The course content has become increasingly complex while needing to keep pace with evolving practical applications of accounting software. Traditional assessment methods no longer align with the new curriculum content and changes, thus presenting new requirements for evaluation. Considering the characteristics of the Accounting Information Systems laboratory course, a comprehensive assessment approach combining multiple evaluation methods is employed based on students; experimental processes to evaluate their learning outcomes. The implementation of an objective and comprehensive evaluation system for accounting information systems experiments can better guide and motivate students to actively complete experimental tasks, thereby enhancing learning outcomes and achieving optimal teaching effectiveness. Starting from the characteristics of accounting information systems courses, this research combines the target audience and educational objectives to analyse shortcomings in existing assessment methods. It designs a process-oriented evaluation framework specifically tailored for accounting information systems courses (Grabski et al., 2011).

2.2 Basic ideas of project research

Teaching is conducted through problem-oriented and task-driven approaches, incorporating role-playing and scenario simulation. The experimental course environment is redesigned around a teaching framework: "task assignment—experimental operation—problem identification—analysis & solution—principle summarization—report writing." This emphasizes student-centred learning, motivates active participation in experiments, and guides students to think critically through in-class and out-of-class tasks, enhancing their problem-solving abilities (Pan & Seow, 2016).



Scenario simulation is integrated into teaching. For practical training, students form groups of 5–6 to simulate an enterprise, managing its accounting data. Role assignments (e.g., accounting supervisor, general ledger accountant, cashier, procurement supervisor, sales supervisor, asset manager) enable collaborative operations, peer reviews, and hands-on experience of different roles. This enhances learning interest, cultivates decision-making skills, and guides students to identify problems independently (Jimei et al., 2018).

Diverse teaching methods and tools are adopted, including case studies, multimedia teaching, and online learning. When explaining AIS theories and methods, students are encouraged to focus on current issues in China's accounting information field, linking theory with practice and analysing classic corporate cases. centred on cultivating application capabilities, this approach highlights student engagement, teacher-student interaction, and active learning through case analysis, group discussions, multimedia lectures, and online teaching.

Refine the teaching syllabus by integrating financial robotics application knowledge and introducing specialized modules. Incorporate rigorous professional ethics and socialist core values as guiding principles throughout all course content. Conduct in-depth discussions to identify key ideological education elements, incorporating accounting cases that align with China's national conditions. This approach not only enhances students' critical thinking skills but also fosters strong patriotic sentiments and value-based identity (Charland et al., 2016).

Curriculum Ideological and Political Education Design. This initiative involves thoroughly exploring ideological elements embedded in teaching content, integrating political education into professional knowledge instruction while continuously refining teaching methodologies. When introducing Chinese-specific case studies, emphasis is placed on value orientation and risk management. Students are progressively guided to apply their acquired knowledge of accounting information systems to analyse real-world challenges faced by China, ensuring core values are fully manifested through classroom instruction.

Innovate teaching methods and platforms. By inviting industry experts into classrooms and integrating emerging media such as Blue Ink Cloud Class, WeChat, online learning platforms, MOOCs, financial websites, and financial trading terminals, we extend the classroom experience beyond traditional pre-class preparation to post-class engagement. This approach achieves seamless transition from academic learning to practical application across time and space dimensions.

Explore the course assessment method. The course evaluation includes not only students' mastery of classroom knowledge, but also students emotional experience and value identification in accounting career as two aspects of the assessment system.

Educators must first undergo education themselves. As course instructors, personal cultivation plays a vital role in guiding students' values. The core social values should be genuinely embodied in words and actions. In classroom development, we should approach teaching tasks with enthusiasm, continuously deepen theoretical learning, enhance political awareness, and actively guide students both in and out of class to help them establish correct worldviews and values.

3 The main achievements and characteristics of the project research

3.1 Major achievements of the project research

3.1.1 Completed 3 teaching projects of Accounting Information System

The institution has implemented three teaching programs: the General Ledger System, Reporting System, and Fixed Asset Management System. Grounded in professional theoretical instruction, these initiatives integrate moral education throughout all educational processes. By innovating pedagogical approaches and embedding ethical elements into academic curricula, we significantly enhance the effectiveness of ideological education. We actively incorporate China-specific financial case studies to subtly instil socialist core values through the teaching process. This approach combines value recognition with practical application, guiding students to develop sound financial concepts and employ scientific methods for analysing financial issues.

Through the effective design and implementation of teaching objectives, content, methods, and delivery channels in specialized courses, combined with in-depth interpretation of professional knowledge and exemplary cases, we can embody moral education principles. This approach leverages the value-embedded and value-guiding functions of specialized courses, organically integrating foundational professional knowledge with ideological-political elements. It not only emphasizes cultivating professional talents but also focuses on shaping life values. By fostering students' comprehensive qualities during the teaching process, this methodology helps establish correct worldviews and values while enhancing the effectiveness of specialized education.

Through practical accounting activities, students develop an understanding of professional ethics and standards while recognizing their social responsibilities as accounting practitioners. The program cultivates rigorous integrity, strong ethical awareness, and a sense of social responsibility. Students are encouraged to demonstrate teamwork and collaboration skills, actively implementing the "Accounting Professional Ethics Standards" principles: dedication to one's job, honesty, integrity, objectivity, adherence to standards, skill enhancement, management participation, and service improvement – all integrated into their academic practice.

3.1.2 Bring industry experts into the classroom

In the instructional design of the Accounting Information Systems course, we fully leverage classroom teaching as the primary channel for education. By utilizing multimedia resources and practical training platforms, we invite industry experts to participate in lectures. Centering on core knowledge modules, we establish moral education themes through classic case studies. Students engage in case-based discussions facilitated by scenario creation and interactive teaching methods, transforming abstract concepts into vivid learning experiences that guide value formation. The curriculum emphasizes the integration of professional knowledge with practical applications, achieving comprehensive and holistic educational development throughout the entire learning process.

Industry experts' classroom engagement integrates practical demand-oriented approaches into academic instruction, combining real-world applications with theoretical knowledge to stimulate student reflection and help them identify career development paths while enhancing their competitiveness. The program has succes-



sively invited industry professionals from securities firms, futures companies, asset appraisal agencies, and corporate executives to deliver specialized lectures and engage in in-depth discussions with students, thereby improving their ability to apply knowledge comprehensively.

Industry experts delivered lectures focusing on value and growth investing, providing in-depth analysis from investment banking research perspectives on how to evaluate industry prospects and corporate valuations while establishing sound investment principles. Corporate mentors shared their entrepreneurial journeys with students, offering insights into professional development through personal experiences. The sessions emphasized cultivating practical skills, learning capabilities, social competencies, and innovative thinking through moral integrity, professional ethics, and hands-on training. Students were encouraged to develop well-rounded qualities that meet societal demands during their university years, including enhancing emotional intelligence, reading extensively, and broadening their horizons. After graduation, we should first experience the society and accumulate primitive capital. Based on rich knowledge reserve and a certain degree of industry resources, we can start a business.

3.1.3 Develop teaching cases and simulation cases, and complete the application scheme design of financial robots

Case-based teaching demonstrates distinct advantages in accounting information systems education, effectively integrating abstract concepts with practical scenarios. By transforming passive learning into active engagement, it significantly enhances students' interest and motivation. The course project features case studies including invoice processing robots, expense reimbursement systems, and banking operations platforms. Through carefully selected classic cases, the curriculum restructures both format and content to optimize classroom instruction. This approach encourages thorough preparation and active participation in case discussions, cultivating students' comprehensive ability to analyse and resolve financial theoretical and practical issues while fostering professional ethics and career competence. Specialized talents with literacy.

3.2 The main features and innovations of the project

The teaching design fully utilizes multimedia and training platforms, integrates industry experts, case studies, and competition participation to achieve comprehensive education that combines professional knowledge with value guidance. Unlike traditional exams-focused assessment, this study emphasizes process evaluation, including classroom participation, case analysis, and learning reflections, while incorporating open-ended questions in final exams to cultivate students' patriotic feelings and sense of social responsibility. In the instructional design of the Accounting Information Systems course, we fully leverage classroom teaching as the primary channel for education. By utilizing multimedia resources and practical training platforms, we invite industry experts to participate in lectures. Centering on core knowledge modules, we establish moral education themes and introduce classic case studies. Students are organized to engage in case-based discussions. Through participation in national competitions such as the National College Enterprise Value Creation Competition and the National Undergraduate Accounting Skills Competition, students' values are guided while emphasizing the comprehensiveness and practicality of professional knowledge. This approach ensures holistic and comprehensive education throughout the entire learning process.

To holistically develop students; moral character and professional competencies, we establish a teaching evaluation system grounded in ideological education. Unlike traditional classroom assessments that prioritize final exams, this approach emphasizes comprehensive cultivation of both ethical values and technical expertise while prioritizing emotional engagement and value alignment. The evaluation framework places greater emphasis on process assessment through classroom interactions including Q&A sessions, discussions, case studies, and reflective journals. In designing final exam questions, open-ended questions are incorporated to comprehensively assess learning outcomes, thereby strengthening patriotic consciousness and fostering family-oriented values. National feelings, establish the responsibility and sense of mission for national rejuvenation.

4 Further ideas for project research

4.1 Further refine the characteristics of the curriculum, and continue to develop ideological and political resources and teaching case resources

Summarize project experience to refine course characteristics. Update teaching plans, syllabi, and teaching materials in line with talent cultivation objectives, ensuring coordinated development of teaching links. The project construction experience should be sorted out and summarized to further refine the characteristics. According to the talent training plan, the revised professional teaching plan, the teaching plan, teaching calendar and lesson plan of this course should be updated in time, to present a virtuous cycle of coordinated development of all teaching links.

4.2 Construction and reform of ideological and political teaching materials in courses

Develop textbooks that integrate ideological and political elements with professional knowledge, reflecting systematic, practical, and forward-looking content. Expand into three-dimensional teaching materials including case banks and online resources. Develop a textbook system aligned with the implementation of ideological and political education in courses, reflecting the value orientation of core knowledge. Conduct in-depth research on key questions such as what to teach; and how to teach, continuously enriching and refining the textbook system to ensure its systematizations, practicality, and innovative nature. Simultaneously, promptly adjust supporting materials like exercises, case studies, and learning guides according to changes in core textbooks. Explore methods for developing multi-dimensional textbooks that organically integrate various media formats. Continuously update content, particularly case studies, by tracking the latest domestic and international capital market cases.

4.3 Teacher training

Cultivate a teaching team with strong political literacy, rich experience, and practical capabilities through academic exchanges, professional training, and enterprise practice, ensuring alignment with disciplinary frontiers and industry needs. As the lead instructor of this course, personal cultivation plays a vital role in guiding students' values. The core socialist values are genuinely implemented through daily conduct and speech. In classroom development, I approach teaching tasks with enthusiasm, continuously deepen theoretical learning, enhance political awareness, and actively guide students both in and out of class to help them establish



correct worldviews and values. The curriculum development aims to build a faculty team with rich teaching experience, stable structure, strong political integrity, and effective teaching outcomes. Through participation in domestic and international academic exchanges and various professional trainings, we stay updated on the latest developments in our discipline. Additionally, engaging in corporate management practices further elevates our capabilities Accounting information analysis ability, accumulate practical experience, improve practical ability.

5 Conclusion

In conclusion, the integration of big data, artificial intelligence, and cloud computing technologies into the teaching of Accounting Information Systems (AIS) marks a shift toward cultivating digital and intelligent competencies among accounting students. The study emphasizes the necessity of reforming traditional AIS pedagogy by adopting intelligent tools, platform-based simulations, and practical teaching models to align with the evolving needs of industry and society. By reconstructing curriculum content, optimizing teaching methods, and enhancing evaluation systems, the reform fosters students' technical abilities and supports interdisciplinary thinking and real-world problem-solving. These efforts serve to bridge the gap between academic training and the digital transformation of the accounting profession, and to offer foundation for the development of innovative and application-oriented talents in the era of smart finance.

Acknowledgement

The article was supported by research projects. Specifically, Research on the Teaching Reform of Accounting Information System Course under the Background of Dazhi Mobile Cloud (JJ2021Y032), and Reform of Blended Teaching Mode for Management Graduate Courses Targeting Deep Learning (JY2024Y009).

References

- Al-Badi, A. H., & Khan, A. (2022). Enterprise Resource Planning Systems' Development in Omani Higher Education' Institutions from the Perspectives of Software' Project Managers and Developers'. *Journal of Business, Communication & Technology*, 1(1), 14-23. DOI:10.56632/bct.2022.1102.
- Boritz, J. E., & Carnaghan, C. A. (2003). Competency-based education and assessment for the accounting profession: A critical review. *Canadian Accounting Perspectives*, 2(1), 7-42. DOI:10.1506/5K7C-YT1H-0G32-90K0.
- Cano-Parra, R., Gómez-Sánchez, E., Bote-Lorenzo, M. L., & González-Martínez, J. A. (2013, November). Cloud-based simulation for education: an illustrative scenario. In *Proceedings of the First International Conference on Technological Ecosystem for Enhancing Multiculturality* (pp. 209-214). DOI:10.1145/2536536.2536568.
- Charland, P., Léger, P. M., Cronan, T. P., & Robert, J. (2016). Developing and assessing ERP competencies: basic and complex knowledge. *Journal of Computer Information Systems*, 56(1), 31-39. DOI:10.1080/08874417.2015.11645798.
- Chornous, G., Banna, O., Fedorenko, I., & Didenko, I. (2021, September). Implementing ERP Simulation

- Games in Economic Education: Ukrainian Dimension. In *International Conference on Information and Communication Technologies in Education, Research, and Industrial Applications* (pp. 112-132). Cham: Springer International Publishing. DOI:10.1007/978-3-031-14841-5_8.
- Chen, K., Teng, Q., & Zhang, Y. (2019, June). Exploring the Curriculum Development of Financial Technology Based on Industry-Academia Collaboration. In *Proceedings of the 2019 International Conference on Modern Educational Technology* (pp. 87-90). DOI:10.1145/3341042.3341064.
- Dalwai, T., Mohammadi, S. S., Chugh, G., & Somerville, A. (2021). Big data analytics and accounting education: a systematic literature review. *Fourth Industrial Revolution and Business Dynamics*, 159-174. DOI:10.1007/978-981-16-3250-1_8.
- Geng, R., Yin, J., Li, R. P., & Li, F. (2021, December). Research on informatization-oriented teaching reform regarding major of accounting in higher vocational education in the background of Big Data. In *2021 2nd International Conference on Big Data Economy and Information Management (BDEIM)* (pp. 446-452). IEEE. DOI:10.1109/BDEIM55082.2021.00097.
- Grabski, S. V., Leech, S. A., & Schmidt, P. J. (2011). A review of ERP research: A future agenda for accounting information systems. *Journal of information systems*, 25(1), 37-78. DOI:10.2308/jis.2011.25.1.37.
- Guragai, B., Hunt, N. C., Neri, M. P., & Taylor, E. Z. (2017). Accounting information systems and ethics research: Review, synthesis, and the future. *Journal of Information Systems*, 31(2), 65-81. DOI:10.2308/isys-51265.
- Hoic-Bozic, N., Mornar, V., & Boticki, I. (2008). A blended learning approach to course design and implementation. *IEEE transactions on education*, 52(1), 19-30. DOI:10.1109/TE.2007.914945.
- Hwang, M., & Cruthirds, K. (2017). Impact of an ERP simulation game on online learning. *The International Journal of Management Education*, 15(1), 60-66. DOI:10.1016/j.ijme.2017.01.004.
- Huimin, L., & Guomin, S. (2020, October). Research on the teaching reform of finance and accounting major under the background of Big Data. In *2020 International Conference on Big Data & Artificial Intelligence & Software Engineering (ICBASE)* (pp. 73-77). IEEE. DOI:10.1109/ICBASE51474.2020.00023.
- Handoyo, S. (2024). Evolving paradigms in accounting education: A bibliometric study on the impact of information technology. *The International Journal of Management Education*, 22(3), 100998. DOI:10.1016/j.ijme.2024.100998.
- Iverson, K., & Colky, D. (2004). Scenario-based E-learning design. *Performance Improvement*, 43(1), 16-22. DOI:10.1002/pfi.4140430105.
- Jimei, L. I., Ruohui, W. A. N. G., & Yanbin, F. E. N. G. (2018, August). Modeling of ERP skill assessment features. In *2018 13th International Conference on Computer Science & Education (ICCSE)* (pp. 1-6). IEEE. DOI:10.1109/ICCSE.2018.8468865.
- Kastberg, G., & Siverbo, S. (2013). The design and use of management accounting systems in process oriented health care—an explorative study. *Financial Accountability & Management*, 29(3), 246-270. DOI:10.1111/faam.12014.
- Massey, D. W., & Van Hise, J. (2009). Walking the walk: Integrating lessons from multiple perspectives in the development of an accounting ethics course. *Issues in Accounting Education*, 24(4), 481-510. DOI:10.2308/iace.2009.24.4.481.
- Mahalingam, T. (2024). Bridging the gap between academia and industry: a case study of collaborative curriculum development. *International Journal of Business Performance Management*, 25(4), 589-603.



DOI:10.1504/IJBPM.2024.139482.

Misra, R. (2020). Industry-Academia Collaborative Teaching –A Journey. *Journal of engineering education transformations*, 50-57. DOI:10.16920/jeet/2020/v33i4/141136.

Ng, C. (2023). Teaching advanced data analytics, robotic process automation, and artificial intelligence in a graduate accounting program. *Journal of Emerging Technologies in Accounting*, 20(1), 223-243. DOI:10.2308/JETA-2022-025.

Polimeni, R. S., & Burke, J. A. (2021). Integrating emerging accounting digital technologies and analytics into an undergraduate accounting curriculum—A case study. *Journal of Emerging Technologies in Accounting*, 18(1), 159-173. DOI:10.2308/JETA-2020-042.

Pan, G., & Seow, P. S. (2016). Preparing accounting graduates for digital revolution: A critical review of information technology competencies and skills development. *Journal of Education for business*, 91(3), 166-175. DOI:10.1080/08832323.2016.1145622.

Rastogi, P. N. (2003). The nature and role of IC: Rethinking the process of value creation and sustained enterprise growth. *Journal of Intellectual Capital*, 4(2), 227-248. DOI:10.1108/14691930310472848.

Ramesh, G., Azzah, A. M., Habiba, M. S. A. M., & Pauline, S. M. (2025). Gamification and students' engagement in accounting courses—an experimental study. *Learning and Teaching in Higher Education: Gulf Perspectives*. DOI:10.1108/LTHE-12-2020-0063.

Sonnenberg, C., & Vom Brocke, J. (2014). The missing link between BPM and accounting: Using event data for accounting in process-oriented organizations. *Business Process Management Journal*, 20(2), 213-246. DOI:10.1108/BPMJ-12-2012-0136.

Sledgianowski, D., Goma, M., & Tan, C. (2017). Toward integration of Big Data, technology and information systems competencies into the accounting curriculum. *Journal of Accounting Education*, 38, 81-93. DOI:10.1016/j.jaccedu.2016.12.008.

Simmons, M., & Chi, H. (2012, October). Designing and implementing cloud-based digital forensics hands-on labs. In *Proceedings of the 2012 Information Security Curriculum Development Conference* (pp. 69-74). DOI:10.1145/2390317.2390329.

Tweedie, D., Dyball, M. C., Hazelton, J., & Wright, S. (2013). Teaching global ethical standards: A case and strategy for broadening the accounting ethics curriculum. *Journal of business ethics*, 115(1), 1-15. DOI:10.1007/s10551-012-1364-9.

Tang, W., & Zhang, Z. (2022, July). Design of Intelligent Financial Education Assistant System Based on Blockchain. In *International Conference on E-Learning, E-Education, and Online Training* (pp. 62-74). Cham: Springer Nature Switzerland. DOI:10.1007/978-3-031-21161-4_6.

Tawfik, O. I., & Elmaasrawy, H. E. (2023). Assessing the factors that affected the development of cloud-based accounting education and students' academic performance in Oman. *Arab Gulf Journal of Scientific Research*, 41(2), 141-157. DOI:10.1108/AGJSR-07-2022-0102.

Trigo, A., Belfo, F., & Estébanez, R. P. (2016). Accounting Information Systems: evolving towards a business process oriented accounting. *Procedia Computer Science*, 100, 987-994. DOI:10.1016/j.procs.2016.09.264.

Wu, Y. (2021, December). Intelligent learning of digital finance and accounting based on neural network technology. In *2021 International Conference on Aviation Safety and Information Technology* (pp. 44-48). DOI:10.1145/3510858.3510879.

Wang, J., & Ma, X. (2024). Research on the Application-oriented Talent Training Mode of" Post-Course,

- Competition, Certificate, and Creation". *International Journal of Linguistics, Literature & Translation*, 7(9). DOI:10.32996/ijllt.2024.7.9.8.
- Wang, Z., Wang, N., Su, X., & Ge, S. (2016). Differentiated management strategies on cloud computing data security driven by data value. *Information Security Journal: A Global Perspective*, 25(4-6), 280-294. DOI:10.1080/19393555.2016.1231353.
- Yan, D., & Dong, Y. (2025). Updating and Practical Research on Teaching Content of Accounting Information System in the Context of Big Data. *Applied Mathematics & Nonlinear Sciences*, 10(1). DOI:10.2478/amns-2025-0075.
- Zhang, Y., Zhang, M., Wu, L., & Li, J. (2025). Digital Transition Framework for Higher Education in AI-Assisted Engineering Teaching: Challenge, Strategy, and Initiatives in China. *Science & Education*, 34(2), 933-954. DOI:10.1007/s11191-024-00575-3.
- Zhang, A., & Zhao, Y. (2022). Future challenges of accounting education in China using artificial intelligence assisted multimedia based smart accounting system. *ACM Transactions on Asian and Low-Resource Language Information Processing*. DOI:10.1145/3517914.
- Zhang, C., Issa, H., Rozario, A., & Soegaard, J. S. (2023). Robotic process automation (RPA) implementation case studies in accounting: A beginning to end perspective. *Accounting Horizons*, 37(1), 193-217. DOI:10.2308/HORIZONS-2021-084.
- Zeide, E. (2017). The structural consequences of big data-driven education. *Big Data*, 5(2), 164-172. DOI:10.1089/big.2016.0061.

