

Research on the Reform of the Curriculum System for Business Administration Programs in the Context of Digital Transformation

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Abstract: *Against the backdrop of rapid development in the digital economy, digital technologies such as big data, artificial intelligence, and cloud computing are profoundly transforming business management models, thereby imposing new demands on the cultivation of business administration professionals. This paper is grounded in the context of digital transformation, conducting an in-depth analysis of the issues within traditional business administration curriculum systems. It proposes a three-tiered curriculum framework comprising: a cross-disciplinary “Economics-Management-Accounting-Data” platform course cluster; an interdisciplinary course cluster leveraging science and engineering strengths, and a specialized direction-based personalized course cluster combined with digital and intelligent technology and engineering courses. Through a combination of theoretical research and practical exploration, taking the business administration program at Anhui University of Finance and Economics as an example, this study explores effective pathways for reforming the digital and intelligent course system. The research findings indicate that this course system effectively enhances students' digital thinking, cross-disciplinary integration capabilities, and innovative practical abilities, providing an effective pathway for cultivating composite business administration talent capable of meeting the demands of the digital and intelligent era.*

Keywords: *Digital and Intelligent Transformation; Business Administration; Course System; Interdisciplinary Integration; Composite Talent*

1. Introduction

Since the 18th National Congress of the Communist Party of China, the Party Central Committee has attached great importance to the development of the digital economy, the construction of a digital China and a smart society, and the promotion of digital industrialization and industrial digitalization^[1]. The cluster-based and interactive development of information technologies represented by big data, artificial intelligence, mobile internet, cloud computing, and blockchain is profoundly changing traditional business models and organizational management methods^[2]. The construction of a comprehensive digital intelligence system has become a new competitive arena for enterprises and a new direction for industrial layout. The Higher Education Division of the Ministry of Education has emphasized in its 2023 work priorities the need to accelerate the digital transformation of higher education, deeply implement digital strategy initiatives, shape new advantages for the reform and development of higher education, systematically aggregate and integrate innovation and entrepreneurship resources, and enhance students' ability to solve practical problems and transfer and apply knowledge^[3]. The construction of new business and management programs is an important component of the new liberal arts initiative^[3]. It represents a new task and inevitable trend in the development of economics and management programs and talent cultivation under the digital intelligence context^[2]. This requires breaking free from the traditional single-discipline frameworks of economics and management, and scientifically integrating interdisciplinary concepts and paradigms that incorporate modern technologies such as artificial intelligence, big data, blockchain, and mobile internet into professional development and talent cultivation.

As the core discipline of economic and management-related majors, the business administration major bears the important mission of cultivating management talent for various industries. However, in the face of new requirements for digital and intelligent transformation, the traditional business administration major curriculum system lags behind in terms of talent cultivation objectives, course structure, and teaching methods, necessitating systematic reform and innovation. This study takes the

business administration program at Anhui University of Finance and Economics as an example to explore effective pathways for reforming the curriculum system of business administration programs under the backdrop of digital and intelligent transformation, providing theoretical support and practical guidance for cultivating composite management talent that meets the requirements of the new era.

2. Literature Review and Theoretical Foundation

2.1 The Connotation and Characteristics of Digital and Intelligent Transformation

Digital and intelligent transformation refers to the process of comprehensively transforming traditional business models, organizational structures, and management processes through the application of digital and intelligent technologies. Verhoef et al. (2021)^[4] argue that digital transformation is not merely the application of technology but a fundamental transformation of organizational thinking patterns and business logic. In a digital and intelligent environment, enterprises must possess capabilities such as data-driven decision-making, intelligent operations, and agile responses to market changes, which impose new requirements on the knowledge structure and competence of management talent.

Digital transformation has the following main characteristics: first, technological integration, where big data, artificial intelligence, cloud computing, and other technologies are integrated to form synergies; second, systemic transformation, which involves not only technological aspects but also comprehensive changes in organizational structure, business processes, and corporate culture; third, continuous evolution, as digital transformation is an ongoing process that requires enterprises to continuously adapt to technological developments and market changes; and fourth, value creation, where digital means are used to create new commercial value and competitive advantages.

2.2 Research on the reform of higher education curriculum systems

Curriculum systems are core elements of talent cultivation, directly influencing the quality and standards of talent development. Tyler (2013)^[5] emphasized in his goal-oriented model theory that curriculum design should revolve around clear educational objectives, prioritizing the needs of learners and societal development requirements. Biggs (1996)^[6] proposed the constructivist consistency theory, which emphasizes the consistency between learning objectives, teaching activities, and assessment methods.

In the digital age, curriculum reform places greater emphasis on interdisciplinary integration and practical application. In recent years, scholars both domestically and internationally have conducted extensive research on curriculum reform in business administration programs. The business education in the digital age should focus on cultivating students' digital literacy, critical thinking, and innovative capabilities. The development of new economics and management programs should transcend traditional disciplinary boundaries to construct an interdisciplinary integrated curriculum system^[7].

2.3 Theory of Composite Talent Cultivation

Composite talent refers to individuals with a diversified knowledge structure, multidimensional capabilities and competencies, and the ability to adapt to dynamic environments^[8]. In the context of digital intelligence, composite talent should possess the following characteristics: first, a composite knowledge structure, encompassing both professional foundational knowledge and interdisciplinary knowledge; second, diversified capabilities and competencies, including both professional skills and digital thinking and innovation capabilities; and third, strong adaptability, enabling continuous learning and development in rapidly changing environments.

3. Issues with the Traditional Business Administration Curriculum System

Through in-depth research and analysis, it has been found that the traditional business administration curriculum system faces the following three main issues in the context of digital transformation:

3.1 Discipline-centric approach lacks communication with related disciplines, resulting in low interdisciplinary integration

Historically, the cultivation of business administration professionals has focused on deepening

expertise within the discipline, prioritizing the disciplinary affiliation of knowledge over communication and integration with related disciplines. The barriers between disciplines limit interdisciplinary education, resulting in low levels of disciplinary integration and an inability to establish a systematic digital and intelligent integration curriculum system. This lack of integration in educational content undermines students' ability for sustainable development.

This is manifested in the following ways: first, course offerings are limited to traditional economics and management disciplines, lacking organic integration with emerging fields such as computer science, data science, and artificial intelligence; second, the knowledge structure of the faculty is too narrow, making it difficult to conduct interdisciplinary teaching; third, students' knowledge structures are relatively closed, lacking cross-disciplinary thinking and integration capabilities.

3.2 Talent cultivation emphasizes theoretical courses while practical teaching is insufficient

Traditional talent cultivation has focused on theoretical knowledge learning and the reinforcement of practical applications within professional fields, with relatively insufficient interdisciplinary integrated practical teaching, resulting in an incomplete system for cultivating students' practical abilities^[9]. This is specifically manifested in the following aspects: First, practical teaching components are relatively weak. In traditional curriculum systems, theoretical courses dominate, while practical courses account for a low proportion, leaving students with insufficient hands-on practice opportunities and unable to develop a capability system that integrates theory and practice. Second, practical content lacks digital and intelligent characteristics. Current practical teaching primarily remains at the level of traditional management simulations and case analyses, lacking practical content that integrates with digital and intelligent technologies such as big data analysis, artificial intelligence applications, and digital operations. Third, practical platform construction is lagging behind. There is a lack of modern digital and intelligent practical teaching platforms and facilities, making it difficult to provide students with authentic digital and intelligent application environments and experiences. Fourth, the depth of school-enterprise cooperation is insufficient. Cooperation with enterprises is mainly limited to superficial internship and training levels, lacking in-depth industry-academia-research cooperation projects, making it difficult for students to gain exposure to the cutting-edge.

3.3 Single educational entity, and incomplete industry-academia-research collaborative education mechanism

Currently, the cultivation of business administration talent primarily relies on internal university resources, resulting in a relatively single educational entity and the absence of an effective industry-academia-research collaborative education mechanism^[10]. Specifically: First, the school-enterprise cooperation mechanism is incomplete. Although some school-enterprise cooperation relationships have been established, the depth of cooperation is insufficient, and there is a lack of stable, long-term cooperation mechanisms, resulting in low enthusiasm from enterprises to participate in talent cultivation. Second, the involvement of industry experts is insufficient. There is a lack of systematic mechanisms for industry experts to participate in classrooms and projects, making it difficult for students to access the latest industry developments and practical experience. Third, the level of international cooperation needs to be improved. In the context of global digitalization and globalization, there is a lack of in-depth cooperation with leading international universities and enterprises, resulting in insufficient cultivation of students' international perspectives and capabilities. Fourth, the evaluation system for collaborative education is incomplete. There is a lack of a scientific evaluation system for the effectiveness of industry-academia-research collaboration, making it difficult to effectively promote the continuous improvement and refinement of collaborative education mechanisms.

4. Construction of a Digital Intelligence-Oriented Business Administration Curriculum System

Based on an in-depth analysis of the issues with the traditional curriculum system, this study has constructed a digital intelligence-oriented business administration curriculum system. This system aims to cultivate composite, innovative, and application-oriented management talent, emphasizing interdisciplinary integration and practical application.

4.1 Curriculum System Design Philosophy

Interdisciplinary Integration Philosophy: Breaking down traditional disciplinary boundaries, this

system organically integrates economics, management, computer science, data science, artificial intelligence, and other disciplines to form an integrated knowledge framework encompassing “economics, management, computing, and data science.” Through interdisciplinary integration, it cultivates students' systematic thinking and comprehensive analytical abilities, enabling them to analyze and solve complex management issues from multiple dimensions and perspectives.

Competency-Oriented Philosophy: Focusing on cultivating students' core competencies, the program emphasizes the development of digital thinking, innovation, practical skills, and cross-disciplinary integration capabilities. Course design not only imparts knowledge but also cultivates students' ability to apply knowledge to solve real-world problems, thereby enhancing their sustainable development capabilities.

Industry-Education Integration Philosophy: Strengthening industry-academia-research collaboration in talent cultivation, the program integrates corporate needs and cutting-edge practices into the curriculum, achieving seamless integration between the education chain, talent chain, industrial chain, and innovation chain. Through deep industry-education integration, the relevance and practicality of talent cultivation are enhanced.

4.2 Three-tiered curriculum framework

This study constructs a three-tiered curriculum framework comprising the “Economics, Management, Computer Science, and Data” interdisciplinary platform course cluster, the science and engineering advantage discipline cross-disciplinary course cluster, and the professional direction personalized + digital intelligence technology and engineering course cluster.

First tier: “Economics, Management, Computer Science, and Data” interdisciplinary platform course cluster.

This tier aims to establish a solid interdisciplinary foundation for students, primarily comprising the following four modules: Economics Foundation Module: Includes courses such as Microeconomics, Macroeconomics, and Finance, cultivating students' economic thinking and analytical skills. Management Foundation Module: Includes courses such as Principles of Management, Organizational Behavior, and Corporate Strategic Management, establishing students' theoretical foundation in management. Computer Technology Module: Includes courses such as Programming Fundamentals, Database Principles, and Algorithms and Data Structures, fostering students' computational thinking and technical application skills. Data Science Module: Includes courses such as Statistics, Data Mining, and Machine Learning, fostering students' data-driven thinking and analytical skills.

Second Tier: Interdisciplinary Course Cluster Leveraging Science and Engineering Discipline Strengths.

This tier leverages the university's strengths in science and engineering disciplines to build an interdisciplinary course cluster, primarily including: Digital and Intelligent Business Model Innovation: Combining business model theory with digital technology applications to cultivate students' innovative thinking and business insight. Smart Manufacturing and Operations Management: Integrating traditional operations management with smart manufacturing technology to cultivate students' modern operations management capabilities. FinTech and Risk Management: Integrating financial theory with technological applications to cultivate students' FinTech innovation capabilities. Supply Chain Digital Management: Integrating supply chain management with digital technology to cultivate students' digital operations capabilities.

Third Tier: Personalized Professional Specialization + Digital Intelligence Technology and Engineering Course Cluster.

This tier offers personalized course selections based on students' professional specializations and interests, primarily including: Human Resources Digitalization Specialization: Includes courses such as digital recruitment, talent analysis, and intelligent performance management. Marketing Digitalization Specialization: Includes courses such as digital marketing, customer relationship management, and marketing data analysis. Financial Management Digitalization Specialization: Includes courses such as financial robots, intelligent investment, and risk quantification management. Entrepreneurship and Innovation Management: Includes courses such as digital entrepreneurship, technology innovation management, and entrepreneurial data analysis.

4.3 Course System Implementation Strategy

4.3.1 Teaching Model Innovation

The school adopts a blended teaching model that combines online and offline teaching, as well as theoretical and practical instruction. The school fully leverages modern information technology to develop digital teaching resources and enhance teaching effectiveness and learning experiences.

4.3.2 Faculty Development

The school builds a cross-disciplinary faculty team through various means such as recruitment, training, and collaboration to create a group of teachers who are proficient in both professional theory and digital intelligence technology. Additionally, the school invites industry experts and corporate mentors to participate in teaching to enhance practical teaching standards.

4.3.3 Practical Platform Development

The school develops a modern digital intelligence practical teaching platform, including big data analysis laboratories, business intelligence laboratories, and entrepreneurship incubators, to provide students with authentic practical environments and experiences.

4.3.4 Evaluation System Reform

The school establishes a diversified evaluation system that not only focuses on knowledge mastery but also emphasizes the effectiveness of skill development. The school adopts a combination of process-based and outcome-based evaluations, as well as theoretical and practical assessments, to comprehensively evaluate students' learning outcomes.

5. Practical Explorations in Curriculum Reform

5.1 Implementation Background and Conditions

The Business Administration program at Anhui University of Finance and Economics leverages the university's multidisciplinary strengths in economics, management, law, engineering, literature, science, and arts, providing favorable conditions for digital and intelligent curriculum reform: First, the university has a strong disciplinary foundation. It possesses deep disciplinary roots in economics and management, while also demonstrating significant strength in computer science, statistics, and other science and engineering disciplines, providing a solid foundation for interdisciplinary integration. Second, the faculty is highly qualified. The university boasts a team of highly educated and professionally diverse faculty members, including experts and scholars with in-depth research in fields such as the digital economy and big data applications. Third, the infrastructure is well-developed. The university has modern laboratories and practical teaching platforms, providing the necessary hardware support for the implementation of the digital and intelligent curriculum system. Fourth, there are abundant collaborative resources. The university has established close partnerships with several well-known enterprises, providing a platform for industry-academia-research collaboration in talent cultivation.

5.2 Specific implementation measures

5.2.1 Course content updates

The school comprehensive updates have been made to traditional course content, incorporating digital and intelligent elements while maintaining the integrity of the core professional knowledge system. For example, digital and intelligent management theories have been added to the “Principles of Management” course, digital marketing content has been integrated into the “Marketing” course, and financial technology applications have been included in the “Financial Management” course.

5.2.2 New course development

The school based on the three-tier course system architecture, a series of new courses have been developed: “Business Data Analysis”: Cultivating students' ability to use data analysis tools to solve business problems. “Digital Transformation Management”: Helping students understand and master the theory and practice of enterprise digital transformation. “Artificial Intelligence and Business Applications”: Cultivating students' ability to apply AI technology in business scenarios. “Blockchain and Business Model Innovation”: Exploring the application prospects of blockchain technology in the

business field.

5.2.3 Teaching Method Reform

The school diversified teaching methods are adopted, including: case-based teaching method: Using the latest digital transformation cases to enable students to master theoretical knowledge and practical skills through analysis and discussion. Project-driven method: Using real-world enterprise projects as a platform to enhance students' comprehensive abilities through solving actual problems. Flipped classroom: Students independently learn foundational knowledge before class, with classroom time focused on discussion and practice. Online teaching: utilizing platforms such as MOOCs and Yu Classroom to achieve blended online and offline teaching.

5.2.4 Strengthening Practical Teaching

The school establishes a multi-tiered practical teaching system that includes course experiments, which incorporate experimental components into each professional course to reinforce the integration of theory and practice; comprehensive training, which involves designing cross-course comprehensive training projects to cultivate students' systematic thinking and comprehensive application abilities; enterprise internships, which collaborate with partner enterprises to establish internship bases, enabling students to participate in digital transformation projects on the front lines of enterprises; and innovation and entrepreneurship activities, which encourage students to engage in various innovation and entrepreneurship programs to cultivate innovative spirit and entrepreneurship through practice.

5.3 Industry-Academia-Research Collaborative Education Mechanism

5.3.1 Deep Industry-Academia Collaboration

The school establishes strategic partnerships with leading companies to conduct in-depth collaboration in course development, faculty training, and student internships and training. Industry experts regularly visit the campus to deliver lectures, share the latest industry trends and practical experience; faculty members undertake internships at companies to enhance their practical skills and industry understanding.

5.3.2 Industry College Development

The school collaborates with relevant enterprises to establish industry colleges, achieving resource sharing and complementary advantages. Industry colleges operate under an enterprise-style management model, providing students with education and training closely aligned with industry needs, while also cultivating and supplying high-quality talent to enterprises.

5.3.3 Collaborative Innovation Platform

The school establishes a university-enterprise collaborative innovation platform to conduct joint research and technological breakthroughs around key technologies and application scenarios related to digital transformation. Students can participate in real-world research projects, enhancing their innovative capabilities and technical proficiency through practical experience.

6. Reform Achievements and Evaluation

6.1 Improved Quality of Talent Cultivation

After two years of curriculum reform, significant achievements have been made:

6.1.1 Significant improvement in students' abilities and qualities

Comparative analysis shows that students who participated in the curriculum reform performed well in the following areas; Digital thinking ability: Students are able to use data thinking to analyze and solve management problems and have basic data analysis and visualization skills. Cross-disciplinary integration ability: Students have a more diversified knowledge structure and are able to analyze complex problems from a multidisciplinary perspective. Innovation and practical abilities: Students' enthusiasm for participating in research projects and innovation and entrepreneurship activities has significantly increased, with notable improvements in the quantity and quality of awards received. Employment competitiveness: Graduates' employment rates and employment quality have significantly improved, particularly in fields related to the digital economy.

6.1.2 Teaching effectiveness has significantly improved

Students have a high level of satisfaction with the curriculum reform, with the average course evaluation score increasing by over 10%. Students report that the new curriculum is more closely aligned with practical applications, enabling them to acquire useful knowledge and skills that are highly beneficial for their future career development.

6.2 Achievements in Faculty Development

Through curriculum reform, faculty development has been promoted: Optimized Knowledge Structure: Teachers have optimized their knowledge structures and significantly enhanced their teaching capabilities through participation in interdisciplinary teaching and industry-academia-research collaboration. Enhanced research capabilities: Focusing on the theme of digital transformation, the quantity and quality of research projects undertaken by faculty members have improved. Deepened industry-academia-research collaboration: Collaboration between faculty members and enterprises has become more closely integrated, with expanded depth and breadth in industry-academia-research integration

6.3 Social Impact and Demonstrative Effect

The achievements of the curriculum reform have been recognized by various sectors of society: Industry recognition: Multiple enterprises have indicated that students educated under the reformed curriculum are better equipped to meet the demands of digital transformation, with significantly enhanced comprehensive competencies. Peer attention: Reform experiences have been shared at multiple academic conferences and teaching seminars, receiving high praise from peers. Media coverage: Relevant reform measures and achievements have garnered attention and coverage from mainstream media, generating a positive social impact.

7. Conclusions and Outlook

7.1 Main Conclusions

Through in-depth theoretical research and practical exploration, this study has drawn the following main conclusions: First, constructing a digital intelligence-oriented business administration curriculum system is an inevitable requirement of the times. In the context of the rapid development of the digital economy, the traditional business administration curriculum system is no longer adequate to meet new talent cultivation needs and must undergo systematic reform and innovation. Second, the interdisciplinary integration of “economics, management, computing, and data science” is the core of curriculum system reform. By breaking down disciplinary boundaries and achieving the organic integration of economics, management, computer science, and data science, high-quality talent with composite knowledge structures and cross-disciplinary integration capabilities can be cultivated. Third, a three-tiered curriculum framework can effectively address the issues of the traditional curriculum system. By establishing interdisciplinary platform-based course clusters, cross-disciplinary course clusters, and personalized course clusters, the system ensures the systematic nature of foundational knowledge while reflecting professional specialization and personalized needs. Fourth, industry-academia-research collaboration in talent cultivation is key to enhancing the quality of talent development. Through deepening university-industry partnerships, establishing industry colleges, and constructing collaborative innovation platforms, the system can effectively enhance the relevance and practicality of talent cultivation.

7.2 Future Outlook

Looking ahead, the reform of the business administration curriculum system guided by digital intelligence still needs to be deepened in the following areas: First, continuously update course content. With the rapid development of digital intelligence technology, it is necessary to continuously track cutting-edge technological trends and promptly update course content to ensure that talent cultivation keeps pace with technological development. Second, deepen international cooperation. In the context of globalization, it is necessary to strengthen cooperation with leading international universities and enterprises, introduce advanced educational concepts and practical experience, and enhance the internationalization level of talent cultivation. Third, improve the evaluation system. The school

establishes a more scientific and comprehensive talent cultivation quality evaluation system that not only focuses on the mastery of knowledge and skills but also emphasizes the cultivation of core competencies such as innovation ability, critical thinking, and lifelong learning ability. Fourth, the school promotes and applies its accumulated experience. The school summarizes and refines the experience accumulated in the reform process to form replicable and scalable reform models, providing references for curriculum system reforms at other universities.

The digital transformation is an irreversible trend of the times, and the reform of the business administration curriculum system is a long-term task. Only by continuously deepening reform and innovation can we cultivate high-quality management talent truly suited to the needs of the digital age and contribute to promoting high-quality economic development.

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References

- [1] Yuan Q, Wang Y J, Chen C. *New Engineering and New Liberal Arts: "Double Brain" Convergence to Co-create the Future*[J]. *Research in Higher Engineering Education*, 2019, (05): 23-29.
- [2] Xie S H. *The Basic Direction, Key Issues, and Critical Path for Deepening the Comprehensive Reform of Higher Education in the New Era*[J]. *China Higher Education*, 2024, (11): 22-26.
- [3] Ministry of Education. *Opinions on Accelerating the Construction and Development of New Engineering and Implementing the Excellent Engineer Education and Training Program 2.0*[Z]. *Teaching Document* [2018] No. 3, 2018.
- [4] Verhoef, P C, Broekhuizen T, Bart Y, et al. *Digital transformation: A multidisciplinary reflection and research agenda*[J]. *Journal of Business Research*, 2021, 122: 889-901.
- [5] Tyler, Ralph W. *Basic principles of curriculum and instruction. Curriculum studies reader E2*. Routledge, 2013. 60-68.
- [6] Biggs J. *Enhancing teaching through constructive alignment*[J]. *Higher Education*, 1996, 32(3): 347-364.
- [7] Zhang J. *Green Education: Reforms and Transformations in China's Higher Education in the New Era*[J]. *China Higher Education Research*, 2024, (10): 1-10+35.
- [8] Wu Y. *Building "Golden Courses" in China*[J]. *China University Teaching*, 2018, (12): 4-9.
- [9] Zhang Y Q. *New Deployment and New Mission for the Modernization of Higher Education in China*[J]. *Journal of Suzhou University (Education Science Edition)*, 2023, 11(01): 1-8.
- [10] Zhang Q. *Research Framework for the Digital Transformation of Higher Education: A Literature Review and Outlook Based on Basic Connotations, Influencing Factors, and Implementation Effects*[J]. *Higher Education Development and Evaluation*, 2025, 41(02): 34-46+130.