Research on the Reconstruction and Innovation Path of Management Curriculum System under the Perspective of New Quality Productivity—Theoretical Analysis and Practical Exploration Based on a Four-dimensional Framework

Dan Jie * and Hang Xing

School of Business, Chengdu University, Chengdu, China
*Corresponding author

***Abstract*—New quality productivity has put forward new requirements for the cultivation of management talents in universities, namely knowledge integration, technology-driven, and innovation-integrated approaches. The current management curriculum system suffers from problems such as rigid structure, outdated content, single form, and one-sided evaluation, making it difficult to adapt to the ability requirements of the development of new quality productivity. Based on the theory of competency-based education, this study, starting from the theoretical connotation of new quality productivity, systematically analyzes its requirements for the transformation of management talents in three aspects: knowledge structure, ability and literacy, and learning methods. It then constructs a four-dimensional reform framework covering curriculum goal reconstruction, curriculum content reshaping, curriculum form reconstruction, and curriculum evaluation innovation. Based on this, practical paths such as deep integration of industry and education, improvement of teachers' digital literacy, and institutional mechanism guarantees are proposed, aiming to deliver high-quality management talents with digital literacy, cross-disciplinary thinking, and innovative capabilities to the development of new quality productivity.**

***Keywords*—new quality productivity, management curriculum system, curriculum restructuring, industry-education integration, talent cultivation**

I. Problem Statement

New quality productivity is an advanced productivity quality characterized by innovation, high technology, high efficiency, and high quality, which puts forward new requirements for talent training in higher education [1]. In January 2024, General Secretary emphasized at the 11th collective study of the Political Bureau of the CPC Central Committee that "developing new quality productivity is an inherent requirement and an important focus for promoting high-quality development", and that "reforms of the science and technology system, education system and talent system should be deepened to remove obstacles that hinder the development of new quality productivity" [2]. As an applied discipline that directly serves economic and social development, the quality of talent training in management directly affects the transformation efficiency of new quality productivity. However, there is a significant gap between the current curriculum system of management majors in universities and the talent needs of the new era. The main problems are reflected in the following four dimensions.

First, the curriculum structure is rigid, and the disciplines are clearly separated. The traditional management curriculum system is divided into modules according to functional areas. Courses such as strategic management, marketing, and human resource management are relatively independent and lack organic integration. This curriculum system, which is organized according to the boundaries of disciplines, makes it difficult to cultivate students' systemic thinking and cross-disciplinary integration capabilities needed to deal with complex business problems. In the real business environment, the problems faced by enterprises are never divided according to "functional modules". Managers need to use multidisciplinary knowledge to make judgments and decisions in dynamic situations.

Second, the curriculum content is outdated and disconnected from industry practice. Enterprise management in the digital economy era has deeply relied on big data analysis and artificial intelligence-assisted decision-making, but most management textbooks are updated slowly, and cutting-edge content such as business intelligence, data decision-making, and machine learning applications has not been integrated into the curriculum system in a timely manner. The tension between the theoretical bias of the course content and the cultivation of practical ability is becoming increasingly prominent, leading to a widening "ability gap" between what students learn and what industries need.

Manuscript received July 19, 2026; accepted August 17, 2026; published September 8, 2026.

Third, the course form is single, and the digital application is superficial. Most courses are still mainly taught by teachers in the classroom, and the application of digital means is limited to PPT presentations and has not truly touched the reconstruction of the teaching process. Although some courses are named "blended teaching", the online and offline teaching links lack substantial deep integration, and online resources become mere formalities, failing to effectively support students' independent exploration and in-depth construction.

Fourth, the course evaluation is one-sided and lacks ability orientation. The current evaluation system is dominated by the final written test scores, focusing on the students' ability to memorize and reproduce knowledge points, and lacks effective assessment of innovative thinking, critical thinking, and the ability to solve complex management problems. This evaluation orientation has, to some extent, "directed" the students' learning behavior, emphasizing memorization over understanding, emphasizing scores over ability, which is in conflict with the quality requirements of new productivity for management talents.

Therefore, systematically reconstructing the management curriculum system under the perspective of new productivity and exploring a systematic innovation path from concept to practice has become a core issue that needs to be addressed in the reform of management education in universities.

II. The Inherent Regulatory Nature of New Productivity on the Reform of the Management Curriculum System

New productivity takes the leap of laborers, means of labor, objects of labor, and their optimal combination as its basic connotation, and the significant increase in total factor productivity as its core symbol [3]. This systemic leap in the quality of productivity is driving profound changes in industrial forms, organizational methods, and talent demands, posing entirely new requirements for the knowledge structure, competence, and learning methods of management talent cultivation.

A. Knowledge Structure: From Single Management to the Integration of "Management + Technology + Data"

The "high-tech" characteristics of the new quality of productivity mean that data has become a core production factor, and algorithms are becoming important decision-making tools. Future managers must possess knowledge reserves at three levels: first, classic management theories and methods; second, the basic principles and analytical skills of data science; and third, the ability to understand the boundaries of technology application and its commercial value. These three levels are not simply superimposed, but organically integrated—managers must not only "understand the business logic behind the data" but also "clarify the management boundaries of technology application".

This transformation requires the management curriculum system to break down traditional disciplinary barriers and substantially cross-integrate core knowledge from fields such as data analysis, artificial intelligence, and information systems with classic management theories, rather than remaining at a superficial combination of "two courses".

B. Competency and Qualities: From Execution Ability to Innovation Ability and Critical Thinking

New-type productivity is characterized by "high efficiency and high quality", requiring managers not only to be faithful executors of established plans, but also to be system builders capable of discerning environmental changes, identifying opportunities, and proposing innovative solutions. In an increasingly uncertain business environment, standardized management processes are being replaced by intelligent systems, while what is truly irreplaceable is the manager's judgment, insight, and creativity.

Therefore, the core function of the curriculum system needs to leap from the level of explaining "what it is" to the level of methods of "how to do it" and the level of reflection and critique of "can it be better?" The focus of teaching should shift from the one-way transmission of knowledge to the deep shaping of students' thinking patterns.

C. Learning Style: From Passive Acceptance to Lifelong Learning and Digital Adaptability

The speed of knowledge updates is growing exponentially, which means that no static curriculum content can satisfy the knowledge needs of students throughout their entire career once and for all. The core objective of the curriculum system should shift from "teaching students all knowledge" to "teaching students how to learn"—especially the ability to learn independently, cross-disciplinarily, and lifelong through digital tools. "Learning to learn" in the process of solving real-world problems has a far more profound educational value than mastering a specific knowledge point.

The above three levels of reform requirements collectively point to a systematic restructuring of the management curriculum system. Simply "adding" to the existing curriculum framework (such as adding one or two data-related courses) is insufficient to fundamentally address the challenges of new-quality productivity; a holistic redesign is necessary from four dimensions: curriculum objectives, content, form, and evaluation.

III. A Four-Dimensional Framework for the Restructuring of the Management Curriculum System under the Perspective of New-Quality Productivity

Based on the above analysis, this study uses Competency-Based Education (CBE) as its theoretical foundation and constructs a four-dimensional framework for the reconstruction of the management curriculum system under the perspective of new-quality productivity. The CBE theory emphasizes learner-centeredness and competency achievement as the guide, and uses clear competency goals to guide curriculum design,

implementation and evaluation [4]. The framework includes four interactive and mutually supportive dimensions: curriculum goal reconstruction, curriculum content reshaping, curriculum form reconstruction and curriculum evaluation innovation. The four dimensions constitute a complete closed loop of "goal-content-implementation-evaluation", which jointly points to the composite requirements of new quality productivity for management talent training.

A. *Restructuring of Curriculum Objectives: Establishing a Three-In-One Training Objective of "Digital Literacy + Innovation Ability + National Sentiment"*

New-quality productivity demands a distinctly complex nature from management talent; curriculum objectives should shift from the traditional single dimension of "knowledge mastery" to the construction of a multi-dimensional capability system. Specifically, the three dimensions of objectives each have their own emphasis and support each other.

The digital literacy dimension focuses on cultivating students' core ability to solve management problems using data thinking, including data acquisition and processing ability, application ability of digital tools and platforms, and data-based intelligent decision-making ability. This dimension responds to the requirements of new quality productivity for managers' knowledge structure of "management + technology + data".

The innovation ability dimension focuses on cultivating students' critical thinking and creative problem-solving ability in the face of uncertain environments, including cross-border resource integration ability, multi-factor system thinking ability, and decision-making and response ability in complex situations. This dimension responds to the requirements of new quality productivity for managers' ability to leap from executors to innovation drivers.

The national sentiment dimension focuses on guiding students to integrate their personal development into the overall national strategy and cultivate their sense of responsibility and ethical awareness in serving China's modernization. This is the inherent meaning of management education transcending instrumental rationality and returning to value rationality. For example, the School of Management of Henan University of Technology integrates the national strategy of food security into the curriculum system and systematically offers characteristic courses such as "Resilience Management of Food Supply Chain" and "Optimization of Food Logistics System", realizing the organic unity of professional knowledge education and national strategic needs [5]. This case shows that the national sentiment dimension of the course objectives is not external to professional education, but can be deeply integrated with the cultivation of professional abilities and mutually support each other.

B. *Reshaping the Course Content: Constructing a Three-Level Progressive Course Module of "basic-Interdisciplinary-Cutting-Frontier"*

Based on the OBE achievement-oriented education concept and focusing on the core competency requirements of management talents for new quality productivity, the course content should shift from "disciplinary knowledge logic" to "ability construction logic", and construct a three-level progressive curriculum module system of "public foundation interdisciplinary professional frontier".

The public basic module focuses on consolidating the foundation of digital intelligence technology. On the basis of the existing tool courses such as mathematics and statistics, additional general knowledge courses such as "Python Programming", "Introduction to Artificial Intelligence", and "Data Thinking and Visualization" have been added to enable all management majors to possess basic data literacy and technical perception abilities, laying a methodological foundation for subsequent cross-disciplinary courses.

The interdisciplinary module focuses on promoting the deep integration of science and technology with economics and management disciplines. Construct interdisciplinary course groups such as "Big Data Management and Application", "Digital Economics", "Business Intelligence", "Smart Operation Management" and "Digital Marketing Analysis", organically embedding core methods such as data modeling, machine learning and algorithmic thinking into management professional courses. The School of Economics and Management of the University of Electronic Science and Technology of China has made beneficial explorations in this regard. Its courses such as "Marketing Management: Digital Thinking and Application" and "Data Science and Business Intelligence" organically integrate core methods such as quantitative analysis, model construction and data calculation into professional basic courses, effectively breaking down disciplinary barriers [6].

The professional cutting-edge module focuses on accurately connecting with the digital application scenarios of the industry. It sets up cutting-edge characteristic courses such as "Intelligent Financial Sharing", "Smart Supply Chain Management", "Artificial Intelligence and Management Decision", and "Financial Technology and Innovation", introducing the latest practices of industrial digital transformation into the classroom. It is worth noting that the development of cutting-edge courses cannot be separated from the industrial soil. The "Digital Twin Experimental Platform for Management Disciplines" jointly built by the School of Management of Shandong University and Lanjian Intelligent has continuously accumulated enterprise operation data by simulating real production scenarios, optimizing 32 production plans annually and reducing costs by more than 86 million yuan [7]. Such deep industry-education integration platforms not only create direct value for enterprises, but also provide fresh and continuously updated practical materials for course development.

C. Course Form Reconstruction: Creating a Hybrid Course Form of "Online Self-Exploration + Offline High-Level Seminar + Virtual Simulation Practice"

Digital empowerment of course teaching is key to using information technology to reorganize the teaching process and realize the paradigm shift from "teaching-centered" to "learning-centered". A single classroom teaching form is difficult to bear the goal of cultivating compound abilities, and it is necessary to construct a hybrid course form integrating online, offline, and virtual simulation.

Online self-exploration is aimed at achieving low-level cognitive goals. By building a digital resource library that includes micro-lecture videos, virtual simulation experiments, and real enterprise case libraries, students can independently complete the constructive learning of basic knowledge before class. Hubei University of Arts and Sciences has built a digital resource library with 320 micro-lecture videos, 18 virtual simulation experiments, and 56 real enterprise case libraries. 80% of the professional courses in the university have implemented blended teaching reform [8]. Its experience shows that the quality and richness of online resources directly determine the implementation effect of blended teaching-resources are not "supporting roles", but the "first driving force" for the reconstruction of the teaching process.

Offline high-level seminars are aimed at cultivating high-level thinking ability. Class time is mainly used to solve common problems generated by students' independent learning and to carry out high-level thinking activities such as case analysis, project discussion, and confrontational debate. Teaching models such as flipped classrooms and flipped classrooms can be introduced to bring forward the low-level knowledge transmission link to the pre-class stage and leave the high-level ability cultivation link in the classroom, so that the limited classroom teaching time can play the greatest teaching effect.

Virtual simulation practice is aimed at training contextualized ability. For management scenarios that are difficult to fully reproduce in real scenarios, such as corporate mergers and acquisitions, crisis public relations, multinational operations, and supply chain disruptions, virtual simulation software can be used to construct a highly realistic simulation environment, allowing students to conduct decision-making exercises in a "quasi-realistic" scenario. The "Tourism Behavior Laboratory" virtual system of the School of Management of Shandong University is linked with the "Three Zeros Courtyard" rural practice base to form a dual-track training mechanism of "simulation verification - practical iteration" [7], providing a model that can be learned from for the organic combination of virtual simulation and real practice.

D. Innovation in Course Evaluation: Establishing a Dynamic Evaluation Mechanism of "Process Data + Ability Performance + Multiple Subjects"

Against the background of new quality productivity, course evaluation should break through the single evaluation model dominated by the final written test and establish a dynamic evaluation mechanism that focuses on process, pays attention to ability, and involves multiple subjects. The core orientation of evaluation reform is: from "what students remember" to "what students can do and what they can create".

Process data-driven evaluation. Based on the learning behavior data recorded by the online learning platform (including video viewing time and regularity, participation quality of online discussions, timeliness and iterative improvement of homework submission, etc.), the learning analysis technology is used to generate a "digital profile" of students' learning, so that the process evaluation can move from "based on impressions" to "based on data". The School of Management of Shandong University has made a forward-looking exploration in this field. Its "academic innovation–social contribution–ethical risk" three-dimensional evaluation radar system, developed in conjunction with Tsinghua Tongfang Knowledge Network, generates quantifiable ability development evaluation indicators by intelligently analyzing core behavioral data such as code contribution, model prediction accuracy, and the adoption rate of solutions by enterprises [7]. Although the maturity of this system needs further testing, its evaluation concept of "inferring ability status from behavioral data" has important directional significance.

Ability performance-oriented evaluation. The final exam questions should be structurally adjusted, greatly reducing the number of rote memorization concept analysis questions and increasing comprehensive analysis questions, case diagnosis questions and solution design questions, focusing on examining students' practical ability to analyze complex situations and propose solutions using theoretical frameworks. Meanwhile, "project-based assessment" can be used to replace some traditional examinations, requiring students to complete a real or simulated management project in groups, with the project results serving as the core basis for competency evaluation.

Multi-stakeholder participation in evaluation. Introducing diversified evaluation methods such as "project roadshows," "expert reviews from enterprises," and "peer evaluation" expands the evaluation perspective from a single teacher to a multi-stakeholder approach involving "teachers + industry + peers." The introduction of an industry perspective not only helps improve the relevance of the evaluation but also helps students adapt to the evaluation standards of the real business world in advance.

IV. Practical Paths for Innovation in the Management Curriculum System

The implementation of the four-dimensional framework requires systematic institutional design and path guarantees. Based on the analysis of the reform practices of management education in domestic universities, the following four paths constitute the key support for the implementation of the framework.

A. Deepening the Integration of Industry and Education to Promote the Resonance between Curriculum Content and Industry Needs

The integration of industry and education is the core mechanism for responding to the talent needs of new quality productivity from the supply side. In terms of specific operations, this can be promoted from the following three dimensions: First, establish a school-enterprise co-construction mechanism for courses, inviting experts from leading enterprises in the industry to participate deeply in the formulation of course outlines, development of teaching cases, and evaluation of teaching effectiveness, ensuring that course content does not lag behind industry practice; second, promote a "project-based" training model, designing course projects around real management problems in enterprises, enabling students to complete knowledge construction in the process of solving practical problems; third, implement an industry professor (mentor) system, introducing senior executives with rich practical experience into the teaching team, realizing the organic connection between the education chain, talent chain, industry chain, and innovation chain.

B. Enhance Teachers' Digital Literacy and Build a "Dual-Teacher, Dual-Ability" Teaching Team

Teachers are the key implementers of the "last mile" of curriculum reform. If teachers' own digital literacy and cross-disciplinary capabilities are insufficient, any advanced curriculum design concept will remain only on paper. Therefore, teacher capacity building should be systematically promoted from three levels: First, establish interdisciplinary teaching teams to promote joint lesson preparation and collaborative teaching between management teachers and teachers of computer science, data science, and other disciplines, so as to achieve knowledge complementarity and ability transfer in cooperation; second, implement the "dual-teacher, dual-mentor" mechanism, equipping each core course module with academic mentors and industry mentors to form a synergistic effect between theoretical teaching and practical guidance; third, establish a teacher enterprise practice system to encourage teachers to participate in real projects in enterprises as "visiting scholars" or "project consultants," so as to feed practical experience back into teaching. The results of teachers' enterprise practice should be included in the professional title evaluation and performance appraisal system to form a positive incentive system.

C. Improve Institutional Guarantees and Build a Long-Term Mechanism for Continuous Optimization of the Curriculum System

Curriculum reform is not a one-time project and requires a systematic and continuous improvement mechanism as a guarantee. First, establish a dynamic curriculum update mechanism, clarifying the revision cycle for various course contents (it is recommended that cutting-edge professional courses be updated once per academic year, and core foundational courses be revised once every two academic years), and promptly incorporate industrial technology changes and cutting-edge disciplinary advancements into the teaching content; second, improve the teaching evaluation and incentive mechanism, increasing the weight of teaching reform achievements in teacher performance evaluations, and giving full recognition to teachers who have made substantial contributions in curriculum restructuring, textbook development, and case development; third, establish a special fund for curriculum reform to support teachers in developing blended learning resources, virtual simulation experiments, and industry-education integration courses.

D. Build a Curriculum Resource Sharing Platform to Promote Inter-School Collaboration of High-Quality Resources

The resources and capabilities of a single university are ultimately limited, and the in-depth advancement of curriculum reform requires inter-university collaboration and resource sharing. It is recommended that provincial education administrative departments or industry associations take the lead in building a regional digital course resource platform for management, integrating high-quality micro-courses, case libraries, virtual simulation experimental projects, and other course resources to achieve inter-university co-construction and sharing. The "Management Digital Teaching Case Library" built and opened by the School of Management of Shandong University has been fully introduced and implemented by many universities [7]. This practice shows that a high-quality sharing platform can not only reduce the cost of repeated construction by various universities, but also continuously improve the quality of resources through the "use-feedback-iteration" cycle mechanism, forming a networked curriculum improvement ecosystem.

V. Conclusion and Discussion

New quality productivity is not only an economic proposition, but also a profound educational proposition. It requires that university management education must transcend the traditional curriculum setting logic, driven by digital technology, with industry-education integration as the path, and with ability cultivation as the core, to systematically promote the overall reconstruction of the curriculum system. The main conclusions of this study can be summarized in the following three aspects.

First, the new quality of productivity demands a systematic approach to the reform of the management curriculum system. It doesn't require adding one or two new technology courses, but rather a holistic leap from knowledge structure and competence to learning methods. This means that curriculum reform must shift from an "addition" mindset to a "system reconstruction" mindset—re-examining the value orientation of curriculum objectives, the selection logic of curriculum content, the organization of curriculum forms, and the core criteria for curriculum evaluation.

Second, the four-dimensional framework of curriculum system reconstruction—objectives, content,

form, and evaluation—constitutes an internally unified organic whole. The establishment of curriculum objectives is the logical starting point, determining the direction of content selection; the reshaping of curriculum content is the core carrier, bearing the realization of objectives; the reconstruction of curriculum form is the implementation guarantee, determining the efficiency and depth of content delivery; and the innovation of curriculum evaluation is the feedback loop, both verifying the achievement of objectives and driving the continuous optimization of the entire system. These four dimensions are indispensable and interdependent; reform in any single dimension is unlikely to be truly effective.

Third, the effective implementation of the four-dimensional framework relies on the coordinated advancement of four paths: industry-education integration, faculty development, institutional guarantees, and resource sharing. Curriculum reform is never just a matter of the curriculum itself; it requires systematic institutional support and ecological construction. If teachers' capabilities are insufficient, industry-education integration becomes a mere formality, the evaluation mechanism remains unchanged, and resource sharing is ineffective; even the best curriculum design will be unsustainable.

Research limitations and prospects: This study primarily employs literature analysis and theoretical construction methods. The proposed four-dimensional framework still needs to be tested in the practical reform of management courses in specific universities. Future research will focus on the following directions: First, operationalizing the four-dimensional framework into an executable curriculum reform implementation plan, conducting pilot practice in the management major of the Business School of Chengdu University, and accumulating empirical data; second, developing supporting evaluation tools for the achievement of curriculum objectives, and exploring quantitative evaluation methods for the implementation of the framework; third, continuously tracking the reform experiences of similar universities in China, and continuously improving and revising the content structure of the framework through comparative research. We look forward to more researchers and front-line teachers joining the exploration in this field to jointly promote the innovation and transformation of management education in China in the digital age.

Conflict of Interest

The authors declare no conflict of interest.

Funding

This article is the result of the Sichuan Province 2024–2026 Higher Education Talent Training Quality and Teaching Reform Project "Exploration of the Practice Path of Innovation and Entrepreneurship Education in Application-oriented Undergraduate Colleges under the Perspective of New Quality Productivity" [Project Approval No.: JG2024-0932].

References

[1] X. Hu and L. Zhang, "Research on the reform of college curriculum under the concept of competency-based education," *China University Teaching*, no. 5, pp. 56–62, 2021.

[2] C. Chen, "'Management and Engineering Crossover' empowers 'intelligent' cultivation of management talents," *Educ. Herald*, Jun. 5, 2025. [Newspaper article]

[3] School of Management, Shandong University. (2025) 'Digital Intelligence-Symbiosis' promotes the reform of management education. *Guangming.com*. [Online]. Available: https://www.media.sdu.edu.cn/info/1002/38555.htm. (in Chinese)

[4] X. Li, J. Qin, J. Li *et al*., "Constructing a new ecosystem for digital economics and management talent cultivation," *China Education Daily*, Oct. 13, 2025.

[5] J. Yi. (2024). Using CREATE Business School to drive the reshaping of innovative talents and solidify the foundation of Chinese modern business talents. *School of Business, Renmin Univ. China*. [Online]. Available: https://www.rmbs.ruc.edu.cn/xwzx/jsgd/6d445db240d541ac9f99069ad1ebde82.htm. (in Chinese)

[6] Z. Wang, "New quality productivity and digital transformation of higher education," *Chinese Higher Education Research*, no. 3, pp. 28–35, 2024.

[7] Y. Zhang and L. Zhang, "Path and mechanism of reform of talent training model in higher education," *Higher Education Research*, no. 6, pp. 42–50, 2022.