

Teaching Reform and Practical Exploration of the Operations Management Course from the Perspective of "Five Creativity Integration"

Shumin Liu

Zhanjiang University of Science and Technology, Zhanjiang, Guangdong, 524000, China

Abstract

In the context of the digital economy and ongoing industrial upgrading, the cultivation of business administration professionals faces a significant challenge: the growing disconnect between traditional teaching content and the evolving demands of the market. Guided by the educational philosophy of "Five Creativity Integration," this study explores a systematic reform of the teaching model for the Operations Management course. Using questionnaire surveys to diagnose the current state of instruction, the research implements targeted improvements across three key dimensions—course content, teaching methods, and assessment systems. A progressive, three-dimensional teaching reform framework is established, integrating "knowledge transmission, ability cultivation, and quality enhancement." The curriculum organically incorporates five core elements: scientific and technological creativity, ideological and political education, labor creativity, competition creativity, and specialized creativity. This approach aims to strengthen students' innovative thinking, practical skills, and overall competencies, ultimately providing an actionable pathway for cultivating applied management talents suited to the needs of modern industrial development.

Keywords

Teaching Model Reform; Five Creativity Integration; Operations Management; Applied Talent Cultivation.

1. Introduction

With the rapid expansion of the internet economy and intensifying market competition, societal expectations for versatile business administration graduates have risen considerably. Employment data from the past five years indicate a declining trend in both job-match rates and overall employment rates for business administration graduates, signaling a clear misalignment between current curricula and labor market demands. In-depth interviews with industry employers further reveal that companies increasingly value graduates' innovation capacity, practical problem-solving skills, and comprehensive personal qualities over mere theoretical knowledge.

In response to these challenges, this study introduces the "Five Creativity Integration" educational philosophy into the teaching reform of the Operations Management course. It constructs a five-in-one, multi-dimensional cultivation framework that integrates "scientific and technological creativity, ideological and political education, labor creativity, competition creativity, and specialized creativity." This model emphasizes the unity of knowledge and practice, leveraging multi-dimensional integration to stimulate student engagement and cultivate their ability to address complex problems [1]. It is intended to lay a solid foundation for students' future career development.

2. Teaching Reform Practice of the Operations Management Course from the Perspective of Five Creativity Integration

The teaching reform of the Operations Management course has evolved progressively through three stages. The first stage focused on "Competition Creativity Integration," which combined professional learning outcomes with disciplinary competitions to diversify and enhance teaching achievements. The second stage explored a "Three Creativity Integration" model, embedding ideological and political education and innovation-entrepreneurship education into professional course content to cultivate applied talents with a sense of civic responsibility, innovative spirit, and professional competence. The third stage fully implemented the "Five Creativity Integration" reform, introducing scientific and technological creativity and labor creativity while systematically revising the syllabus and instructional content. This stage aimed to comprehensively enhance students' practical abilities and their capacity for interdisciplinary integration.

2.1. Learning Situation Analysis and Course Feedback Based on Questionnaire Surveys

To ensure the reform was grounded in empirical evidence, the research team conducted a systematic questionnaire survey prior to implementation. The survey assessed students' acceptance of the course content and teaching methods following the ideological and political education reform, and introduced a specific dimension for evaluating the degree of Five Creativity Integration. Targeting students from two cohorts who had completed the Operations Management course, the survey collected 259 valid responses, offering robust data to guide subsequent reforms.

2.1.1. Insufficient Momentum in Competition Creativity Integration

Survey results indicated that only 25.16% of students applied course projects to disciplinary competitions, with a mere 16.98% achieving awards. Many students were reluctant to invest additional time in refining project outcomes due to academic pressure. These findings suggest that instructors need to enhance their project guidance skills, stimulate students' motivation for competition participation, and optimize classroom time to encourage sustained engagement beyond class hours. Encouraging cross-disciplinary student teams to participate in competitions may also improve the effectiveness of competition-creativity integration.

2.1.2. Significant Effectiveness in Ideological and Political Integration

Students showed considerable awareness of ideological and political elements within the course, with 71.07% expressing approval. Instruction should emphasize the natural integration of these elements, focusing on cultural cognition and technological guidance as key themes to cultivate students' ideological awareness, professional ethics, and sense of social responsibility. Case-based teaching that incorporates innovative entrepreneurial thinking, entrepreneurship, and craftsmanship can effectively enhance students' overall competence.

2.1.3. Need for Deeper Specialized Creativity Integration

Students responded positively to teaching cases involving enterprise operations, technological innovations, lectures by industry leaders, and analyses of current policies. It is recommended that case selection span macro, meso, and micro levels, with particular attention to local contexts such as enterprises in the Western Guangdong region—for example, Zhanjiang-based companies. This approach can enhance students' professional capabilities, foster innovative thinking, and ensure that specialized creativity integration contributes meaningfully to regional economic development.

2.1.4. Need for Systematic Promotion of Labor Creativity Integration

Student feedback indicated that labor creativity integration remains underdeveloped, highlighting the need for stronger instructor guidance in course design. In chapters covering topics such as site selection, project management, quality management, and supply chain management, localized cases—such as analyses of Zhanjiang industries or logistics optimization for Xuwen pineapples—can stimulate students' exploratory spirit and innovation. Field visits and research activities can cultivate practical skills and a grounded scientific research ethos. Findings from such activities can also be applied to disciplinary competitions or rural revitalization initiatives, achieving multiple educational outcomes through a single approach.

2.1.5. Challenges Facing Scientific and Technological Creativity Integration

Students from arts and humanities backgrounds face inherent challenges in scientific and technological creativity integration, necessitating collaborative efforts across disciplines. Strengthening interdisciplinary cooperation with faculties such as the School of Intelligent Manufacturing and forming multi-specialty teams can enhance research capabilities and overall project quality. Instructors should also focus on identifying and developing innovative elements within student projects, encouraging them to design products or services with core competitive advantages.

2.2. Revision of the Syllabus Centered on the OBE Concept

As the foundational document guiding instruction, the syllabus plays a critical role in shaping teaching implementation. The research team conducted a comprehensive review and systematic revision of the Operations Management syllabus to align course content with contemporary developments. New thematic modules—such as "New Product Development and Industry 4.0" and "Site Selection Decisions and Environmental Protection"—were introduced. The revised syllabus elaborates on elements of scientific and technological innovation, ideological and political education, labor practice, and specialized creativity integration, ensuring the practical realization of the "Five Creativity Integration, Five Education Simultaneously" philosophy.

As a core course in the business administration curriculum, Operations Management integrates with the "Five Creativity Integration" teaching model in the following key ways:

2.2.1. Refined Chapter-Level Teaching Design

Centered on the OBE concept, each chapter's teaching objectives are clearly defined based on thorough learning situation analysis. Course objectives are established at three levels—knowledge, ability, and quality—and are designed to be measurable and achievable. An outcome-oriented approach is adopted to ensure precise control over instructional effectiveness in each session.

2.2.2. Building a Five Creativity Integration Case Library

Guided by the revised syllabus, course content and supporting materials are systematically updated. The "Five Creativity" concepts are embedded into core chapters—such as production planning, new product design, inventory management, and quality management—through the introduction of relevant case studies, thereby enriching both the theoretical depth and practical breadth of instruction.

2.2.3. Innovating the Teaching Method System

In addition to traditional lectures, case analyses, and group discussions, a variety of innovative teaching methods—such as project-driven learning, role-playing, and situational simulations—are employed. These methods foster deeper teacher-student and peer-to-peer interaction, enhancing student engagement and practical competence.

2.3. Optimized Design of the Course Assessment System

Prior to the reform, the assessment method for the Operations Management course combined regular grades (40%) and final exam scores (60%). The final exam primarily assessed textbook knowledge, while regular grades were based on attendance, classroom participation, assignments, and group presentations. This system inadequately reflected students' comprehensive practical abilities.

The Five Creativity Integration teaching model necessitates corresponding adjustments to the assessment system: Introduce in-class tests to evaluate students' immediate grasp of knowledge. practical skills assessments to measure students' ability to solve real-world problems. Include comparisons of practical effectiveness to track students' progression from theory to practice.

Through diversified assessment methods, students' comprehensive practical abilities and knowledge application skills can be more effectively enhanced.

3. Challenges and Difficulties Faced by the Five Creativity Integration Teaching Model

3.1. Dual Challenge of Knowledge System Integration and Teacher Capacity Enhancement

Operations management, as a discipline characterized by broad knowledge coverage and strong practical relevance, requires the organic integration of multiple dimensions—including scientific and technological innovation, industrial innovation, business model innovation, cultural innovation, and institutional innovation—with the five creativity elements. This constitutes a complex systemic endeavor. Currently, teaching materials and resources related to Five Creativity Integration are relatively scarce, and the development and updating of case libraries pose considerable difficulties. Instructors must invest substantial time and effort to improve teaching content, yet textbook updates often lag behind industrial and technological advancements. The emergence of digital textbooks has further compounded these challenges, leaving many educators feeling unprepared.

The Five Creativity Integration curriculum reform imposes higher demands on instructors. Teachers must possess interdisciplinary knowledge and teaching capabilities, enabling them to apply a range of innovative theories and methods flexibly within operations management instruction. Additionally, they must stay abreast of cutting-edge professional knowledge and maintain a deep understanding of technological innovation trends, career development pathways, enterprise management process optimization, social changes, and ideological education. They must also be able to systematically organize and effectively convey this knowledge to students [2].

3.2. Dilemma of Singularity in Assessment Methods

The Five Creativity Integration teaching model emphasizes multi-dimensional, comprehensive evaluation, whereas traditional assessment methods tend to overemphasize exam scores and assignment grades. In the current grading structure, the ratio of regular grades (40%) to exam scores (60%) is fixed, with regular grades primarily comprising attendance, assignments, and group tasks. The assessment dimensions are relatively narrow, making it difficult to holistically evaluate students' overall competence and innovative abilities. Designing an evaluation system that can scientifically measure students' innovation capacity and comprehensive qualities remains a significant challenge in the reform process.

3.3. Imperfect Industry-University-Research Cooperation Mechanism

The Five Creativity Integration teaching model emphasizes close alignment between academic instruction and industrial practice. However, the cooperation mechanisms among universities, enterprises, and research institutions are not yet fully developed. Establishing a stable industry-university-research platform capable of providing rich practical resources and real-world project scenarios is a key issue requiring urgent resolution. Practical obstacles persist in areas such as funding guarantees, practice base construction, and school-enterprise collaborative education mechanisms.

4. Optimization Paths for Operations Management Course Teaching Based on Five Creativity Integration

4.1. Forming a Professional Teaching Team and Building High-Quality Course Resources

To meet the elevated demands imposed by Five Creativity Integration on the Operations Management course, the research team has established a professional teaching team to collaboratively advance course resource development and content optimization. First, the team structure is balanced across senior, middle-aged, and junior faculty, ensuring both experience transfer and innovative vitality. Second, responsibilities are clearly delineated across four major modules—case library, course video library, test question library, and supplementary material library—with regular discussions and updates scheduled according to timelines. Concurrently with course development, attention is paid to enhancing faculty quality through regular team meetings and a "mentoring" system in which experienced instructors guide newer colleagues, thereby fostering collective professional growth.

4.2. Innovating Teaching Methods and Improving the Multi-Dimensional Evaluation System

Integrating the Five Creativity concept, the teaching method system is innovated through the comprehensive use of diverse pedagogical approaches—including case analysis, project practice, teamwork, and role-playing. By guiding students through authentic case analyses and project work, their innovative thinking and problem-solving abilities are cultivated [3].

Addressing the multi-dimensional, comprehensive characteristics emphasized by Five Creativity Integration, the course evaluation methods are redesigned. In addition to traditional exams and assignments, new components such as project report reviews, practical achievement presentations, and peer evaluations are introduced to holistically assess students' learning outcomes and capability performance. Emphasis is placed on evaluating students' teamwork, communication, coordination, and role allocation skills, thereby nurturing their collaborative spirit and organizational abilities. Additionally, assessment dimensions for autonomous learning and innovation capacity are incorporated, encouraging students to demonstrate their innovative potential through participation in disciplinary competitions and research projects. Through these reforms, student learning outcomes are more comprehensively measured, motivation is enhanced, and overall development is promoted.

4.3. Deepening Industry-University-Research Integration to Cultivate Top Innovative Talents

Strengthen in-depth cooperation between the course and industry sectors as well as research institutions, organically combining course content with practical operations management scenarios. Organize students to participate in practical activities such as field visits, corporate internships, and industry research to enhance their practical abilities and industry insight. Considering practical constraints such as funding guarantees and course positioning, a

compromise solution can be adopted: partner companies provide real problems arising from practice, guiding students to conduct analysis, thinking, and solution design; or invite enterprise experts to give special lectures on campus, achieving effective connection between industry and educational resources.

The core goal of the reform is to cultivate students' innovation ability, practical ability, and comprehensive quality. Through course design and teaching practice, stimulate students' innovation awareness and cultivate their ability to solve practical problems; through participation in disciplinary competitions and social practices, continuously enhance students' practical level; closely align with enterprise development needs to cultivate high-quality applied talents capable of adapting to future industrial development needs.

5. Conclusion and Outlook

The teaching model reform of Five Creativity Integration has achieved initial results in the Operations Management course, but still faces many challenges. Future reforms will continue to advance in depth: First, innovation in teaching content, introducing more cutting-edge industry scenarios and developing school-enterprise co-built training projects; Second, enhancement of teacher capabilities, strengthening teachers' practical experience through thematic workshops, pairing with enterprise mentors, etc.; Third, optimization of the evaluation mechanism, establishing dual-track assessment standards focusing on "process + outcomes," paying attention to the effect of students' transformation from theory to practice. In the next step, the research team plans to deepen cooperation with leading local enterprises to jointly build an industry-university-research base, providing students with a complete growth path from classroom learning to project practice. We firmly believe that through continuous effort and innovative exploration, the Five Creativity Integration teaching model will play a greater role in the Operations Management course, laying a solid foundation for students' comprehensive development and future careers.

Acknowledgements

2022 Zhanjiang University of Science and Technology Brand Enhancement Program Curriculum Ideological and Political Demonstration Course "Production and Operations Management" (Project No.: PPJHKCSZ-2022273)

2025 Zhanjiang University of Science and Technology Five Creativity Integration Education and Teaching Reform Project: Artificial Intelligence Empowers the Teaching Reform of "Operations Management B"—Exploring the Integration Path of Specialized and Creative Education Based on the 5E Teaching Method (Project No.: WCRHJG-2025931)

Author Introduction: Liu Shumin (1990—), female, Han ethnicity, born in Shaoguan, Guangdong, Lecturer, Master's Degree, research interests: Enterprise Operations Management, Human Resource Management.

References

- [1] Zhu Aiping, Han Ying, Hu Xiaoya. Construction of "Five-in-One" Applied Chemistry Characteristic Courses Integrating Specialized and Creative Education [J]. *China University Teaching*, 2022(12): 49-53.
- [2] Zhang Aihua, Zhang Shoubo. Construction and Practice of the Integration System of Specialized and Creative Education in Ordinary Universities under the New Development Concept [J]. *Journal of Higher Education*, 2024, 10(03): 81-86+91.

- [3] Ji Yuan. Case Design for Ideological and Political Education in Courses——Taking the Factors and Methods of Facility Location in the *Operations Management* Course as an Example [J]. *Logistics Engineering and Management*, 2024, 46(04): 135-137+115.