

Research on Innovative Thinking of Teaching Mode of University Logistics Management Practice

Peng-Jung Lin, Yanxin Lin, Xin Hong, Wenwen Liu

Yango University, Fuzhou, 350015, China

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Abstract: To address the dilemma of logistics management students in universities lacking specific practical experience and effectively connect with the talent needs of local economic and social industries, it is urgent to cultivate modern logistics talents with both theoretical and practical skills. This study adopts new practical teaching methods, namely problem-oriented learning and action learning, to introduce innovative thinking into the practical teaching mode of universities, solving the current problem of insufficient practical teaching in universities. Collecting data through case studies and comparative analysis involves integrating and expanding existing theories while developing new practical teaching methods. The study found that problem-oriented and action learning methods help to enhance students' willingness and interest in learning, and are worth promoting in logistics management majors in universities.

1. Introduction

The development of logistics management majors in universities fully connects with the pulse of local economic and social industries, is a professional knowledge group with both theoretical and practical knowledge, and accompanies the technological development and market demand of the logistics industry. Universities need to respond quickly in order to cultivate logistics management professionals who meet the requirements of the times. In this context, logistics management majors in universities should cultivate modern logistics talents with both theoretical knowledge and practical skills, solve the dilemma of students lacking practical opportunities, introduce innovative thinking into practical teaching methods and models, and enhance students' willingness and interest in learning.

2. The Importance of Practical Teaching in Logistics Management in Higher Education

2.1. Cultivating the Combination of "Theory" and "Practice" in Students

Cultivating students' practical skills is the goal of the practical teaching mode in logistics management in higher education. To ensure that students gain sufficient practical experience during their learning process, universities can design a variety of practical courses, including simulations of logistics operations, warehouse and distribution management, transportation organization, and other simulated scenarios. Students can operate in a simulated real environment, mastering various aspects

of logistics management, helping them to integrate classroom theoretical knowledge with practical operations, and cultivate their ability to integrate theory and practice, ensuring that students have theoretical knowledge that can be applied in practical settings[1].

2.2. Enhancing Students' Practical Experience

Enhancing students' practical experience is the goal of the practical teaching mode in logistics management in higher education. To provide students with richer practical experiences, universities can collaborate closely with logistics companies to provide internship and practical opportunities. Students can participate in real logistics projects, understand the operation mode, management process, and market demand of enterprises, and cultivate their ability to solve practical problems. At the same time, teachers need to introduce corresponding teaching methods, such as problem-based learning and action-oriented learning, to promote practical teaching in the classroom.

2.3. Cultivating Innovative Practical Abilities

It is crucial to cultivate students' practical abilities, encourage them to participate in various levels of logistics professional competitions, and create new developments and innovations in logistics management through innovative thinking, practice, and creation.

3. Basic Theories

Problem-Based Learning (PBL) consists of elements such as problems, outcomes, students, and teachers. Teachers inspire students to discover and solve problems (outcomes). Students are the protagonists, ultimately proposing a specific and feasible solution. The process is as follows: the teacher explains the connotation of theoretical knowledge; student groups discuss the specific facts (what) and how (how) of theory in practice, and the result is the solution, which is also the teaching outcome; finally, the solution is evaluated by teachers, students, and teaching assistants from all angles (Barrows, 1980)[2].

Action Learning (AL) is about learning knowledge, sharing experiences, creatively solving problems, and taking practical actions. Every three to four students form a learning group. For the proposed problem, they work together, share knowledge and experiences, and finally propose a solution to the problem, gaining knowledge and experience (Revans, 2011).[1-2]

4. Qualitative and Quantitative Research Methods

Using different methods to collect various types of data helps to mitigate bias and limitations of a single research method, and facilitates a more comprehensive collection of information.

4.1. Expanded Case Study Method

The expanded case study method of qualitative research is adopted, supplemented by observation, focused interviews, and collection of practical literature, to enrich theoretical development. This method helps in reconceptualization and expansion of theory, aiming not to construct new theories but to integrate and expand existing ones. By comparing theoretical and interview data, and then comparing concepts and theories, through the exchange of two cycles and intensive analysis, the interpretation of data is facilitated.

4.2. Comparative Analysis

This study focuses on observing 2021 undergraduate logistics management students, collecting data on traditional lecture-style teaching methods and new practical teaching methods for comparative analysis. Teaching assessments are conducted before the end of the course to evaluate the effectiveness of the traditional lecture-style teaching method in the first phase (Weeks 1-8) and the new practical teaching method in the second phase (Weeks 9-16), conducting a comparative study to explore the differences and effectiveness of different teaching methods.

5. Current Status of Practical Teaching Models in Logistics Management in Higher Education

5.1. Curriculum Design

Universities should closely follow the latest trends in logistics management and continuously research industry demands to optimize the curriculum system. In addition to traditional logistics knowledge, the curriculum should also include frontier areas such as the application of information technology in logistics, green logistics, and intelligent logistics systems, to cultivate students' insights into future logistics trends. [3]

5.2. Teaching Content

Teaching content should be practical. Course design can incorporate real cases, introduce cooperative projects with enterprises, and allow students to encounter real logistics management problems in the classroom, providing practical opportunities for problem-solving.

5.3. Practical Components and Internship Opportunities

Practical components and internship opportunities provide valuable practical experience for students, bridging the gap between theoretical knowledge and practical skills. To ensure that students gain rich practical experience during their time at school, universities can collaborate with logistics companies to provide students with real logistics work scenarios, understanding enterprise operation modes, management processes, and market demands. Students can also participate in actual projects of enterprises, develop practical skills, and cultivate problem-solving abilities, and schools can establish a comprehensive practical curriculum system.[4]

5.4. Employment Situation

The employment situation is an important indicator of measuring the quality and effectiveness of logistics management education in universities. To enhance students' competitiveness in the job market, schools should focus on students' learning experiences, strengthen practical cooperation with enterprises during events such as Double 11, Double 12, and the 618 Mid-Year Shopping Festival, accumulate experience in actual work, and improve students' employability. Schools can also organize employment guidance lectures, job fairs, comprehensive quality training, and other activities to provide students with employment guidance and opportunities, enhancing their overall competitiveness.[5]

6. Challenges of Practical Teaching Models in Logistics Management in Higher Education

6.1. Rapid Industry Changes

The logistics management field is rapidly changing, facing challenges due to technological advancements and increasingly complex market demands. To ensure that students in logistics management education in higher education can keep pace with industry developments, universities need to adopt flexible teaching strategies. Universities should establish close cooperation with logistics companies and industry associations.[6] Collaboration with companies can provide access to the latest industry information and real cases, making the curriculum more practical and helping students understand the latest technologies and management methods. At the same time, cooperation with industry associations can provide students with opportunities to participate in industry activities, seminars, and training courses, enhancing their industry understanding and practical experience. Regularly updating the curriculum, introducing the latest logistics technology and management concepts, and exposing students to the latest industry trends are essential.[7]

6.2. Lack of Practical Opportunities

A major challenge facing logistics management education in higher education is the lack of sufficient practical opportunities for students. Practice is a crucial aspect of logistics management education, helping students transform theoretical knowledge into practical skills. To address this issue, universities can actively collaborate with logistics companies and relevant institutions. Through cooperation with companies, schools can provide students with opportunities to participate in actual projects, internships, and practices. Cooperation with companies can ensure that students practice in a real logistics environment, understand enterprise operations, and master practical skills. Schools can also co-build practical bases with logistics companies to provide students with places and opportunities for practice.[8]

6.3. Significant Differences in Student Abilities

A common challenge in logistics management education in higher education is the significant differences in student abilities. Differences in students' disciplinary foundations, practical experiences, and learning interests can affect teaching effectiveness and student academic achievements. To address these differences, universities can adopt personalized teaching to meet the needs of different students. Schools can introduce personalized learning plans. Based on students' disciplinary foundations and academic interests, schools can design courses of different levels and difficulties, allowing students to choose courses that suit their needs, ensuring that each student can learn in a relatively comfortable learning environment. Schools can implement small class teaching or hierarchical teaching. In small class teaching, teachers can pay more attention to each student's learning situation, providing more personalized guidance and tutoring. In hierarchical teaching, schools can group students according to their academic levels, ensuring that the teaching content and difficulty of each group are relatively matched, to ensure that students learn in a relatively adaptable learning environment.

Schools can also encourage students to participate in extracurricular activities and practical projects. Through participation in academic competitions, practical projects, social practices, and other activities, students can choose projects to participate in based on their interests and abilities, broaden their knowledge, develop practical skills, and improve their overall quality.[9]

7. Practical Teaching Models in Logistics Management in Higher Education

Different from the traditional lecturing method, which involves lecturing while writing and copying, the teaching method should engage students in visual and auditory learning, enabling them to learn and internalize the knowledge, leading to a deeper understanding and practical application of the theoretical knowledge in analyzing and solving industrial and enterprise issues in the local economy and society.

7.1. Problem-Oriented Learning

Promote independent and cooperative learning among students, shifting the role of the teacher from a provider to a facilitator, catalyst, and designer. Guide students to understand the 5W1H of theory, including the theorist (Who), theory content (What), theory motivation (Why), theory origin (Where), theory publication year (When), and theory application (How). Problem-oriented learning shifts from teacher-centered to student-centered, with teachers guiding students to learn theories.[10] Each course should correspond to a specific theoretical knowledge study. For example, Porter's 1980 industry analysis framework theory should have its relevant theoretical knowledge points, difficulties, and problems explained clearly. It requires students to think about the theory's implications, guide students in expressing the theory, explain the significance and value of the theory's existence, and then combine the theory with enterprise practices, analyzing the current situation and problems in the industry using the five forces of theory, including the competitive intensity of existing competitors in the industry, the bargaining power of suppliers, the bargaining power of buyers, the threat of potential entrants, and the threat of new entrants, and transforming it into various forms of outcomes, including research reports, papers, specialized books, textbooks, audiobooks, and other forms of outcomes. This process is the learning-thinking-expression-use-transformation, guiding students in the classroom to use a learning-application integrated model of theory and practice. Students understand theoretical thinking through this teaching model, understand the 5W1H of theory, understand and recognize theory and its practice, implement the combination of theoretical and practical aspects in the classroom, and apply theory to analyze and solve problems, achieving the essence of innovative undergraduate education of "integration of learning and application" and "learning what is applicable."

7.2. Action-Oriented Learning

Emphasizing active learning, experiential learning, and reflective thinking stimulates students' learning interest. Educators should encourage students to search for scholars' discourse on theory, understand the academic, management, and social significance of theory, and help students apply theory to analyze and solve problems. During the theoretical learning phase, educators should arrange group discussions, investigations, visits to classmates, friends, seniors, and companies to understand the connection between theory and enterprise. This approach guides more reflection and helps students understand how theory is transformed into practice. By learning, recognizing, understanding, and applying theory to practice, students can see that theory is vivid and applicable, not just dead knowledge. This enhances their willingness to learn and stimulates the combination of theoretical and practical thinking. The traditional lecturing method in the past, where the teacher lectures and students listen, often resulted in too much auditory learning and a lack of tactile learning, leading to many students experiencing mental blockages. There was little interaction between students and teachers, with the teacher being the sole transmitter of knowledge.[11]

7.3. Integration of Learning and Application

Introducing problem-oriented and action-oriented learning interactive teaching methods, it is found that the number of student responses increases, the number of student answers to teacher questions increases, the number of students actively answering questions increases, and the number of students actively presenting learning outcomes at the front of the class increases. Students understand that theory can be applied to analyze industries and enterprises. They can clearly understand how theory is applied and how it is applied to solve the problems faced by enterprises. Theory becomes an analytical tool for "in-class practice" in the classroom, "learning" theoretical knowledge, "applying" theoretical analysis to connect with practice, solving problems, and fully implementing the "integration of learning and application" teaching model.

7.4. Practical Course Design

Practical course design is of great significance in logistics management education in higher education, helping students transform theoretical knowledge into practical operational skills and preparing them for future careers. In practical course design, educators should ensure the effectiveness and practicality of the course. Practical courses should closely focus on the core content of logistics management, and the course content should include packaging, loading and unloading, warehousing, handling, transportation, circulation processing, distribution, information, and other logistics functions. Through simulating actual operations and solving real problems, students can master operational skills and management experience in various links in practice.

7.5. Innovative Teaching Methods

Educators should integrate innovative methods into classroom teaching by arranging group research and discussions for each course topic. They should introduce problems and action learning to lead students in designing solutions, use student-centered practices and activities to facilitate knowledge penetration, and present real scenarios through cases complemented by theory. Additionally, they should observe and survey social conditions to create interactive opportunities. This approach promotes student interaction with themselves, society, enterprises, teachers, and peers, guiding students to generate more reflection, doubts, and extended discussions. This practical experience is actively participated by students, and it is a process of linking students, schools, enterprises, industries, and society. Educators should adopt team collaboration and project-driven learning by dividing students into groups and allowing them to work together to complete logistics projects. This process should include needs analysis, solution design, implementation, and evaluation. Such an approach cultivates students' teamwork and project management abilities. This practical teaching method enables students to better apply theoretical knowledge to actual projects, and trains their practical operational skills. Educators should introduce information technology-assisted teaching by using modern technology, such as virtual simulation and online simulation, to create virtual logistics management scenarios. This allows students to conduct practical operations in a virtual environment and enhance their practical experience. Additionally, with the help of online learning platforms, educators should provide online courses and resources, enabling students to learn anytime and anywhere, broadening their knowledge. Furthermore, educators should encourage students to participate in actual projects and practical activities to reinforce their learning.

7.6. Cultivating Students' Innovation Ability

Cultivating students' innovation ability is very important in higher education logistics management

education. Innovation is the engine driving the continuous development of the logistics management industry and is also a key ability to cope with rapid changes and complex challenges. To cultivate students' innovation ability, schools can establish innovation and entrepreneurship laboratories, provide creative space and resource support, encourage students to propose novel logistics management concepts, technologies, and service models, students can participate in innovation and entrepreneurship competitions, project competitions, etc., to exercise their innovative thinking and teamwork skills; offer courses in innovative management and entrepreneurship, guide students to understand the basic concepts of innovation, cultivate their market insight and innovative thinking. Educators should organize innovation lectures by inviting successful entrepreneurs, business leaders, and innovation experts to share their experiences, explain innovative cases, and inspire students' enthusiasm for innovation. They should also organize innovation workshops to guide students in hands-on practice, cultivating their practical skills and problem-solving abilities. Furthermore, educators should provide innovation and entrepreneurship incubation platforms, offering funding, mentors, and resource support for creative students to help them transform their ideas into practical projects. By cooperating with enterprises, educators can provide practical opportunities for students to implement innovative projects in real-world scenarios, exercising their practical operational skills and enabling them to propose innovative solutions in the constantly changing logistics management industry, thereby injecting new vitality into the industry.

8. Conclusion

This study introduces PBL and AL teaching models into undergraduate teaching and explores the differences in teaching effectiveness between traditional teaching models and new teaching models. It further develops new practical teaching models to enhance the learning willingness and interest of higher education students, which is a topic worthy of further continuous attention. Introducing new teaching methods stimulates students' interest, willingness, reflection, and problem-solving abilities, using five steps repeatedly to enhance learning effectiveness:

The beginning of theoretical narration involves teaching relevant professional theories and practices.

Group discussions guide the integration of theory and practice, promote interaction, and enhance learning.

Practical operations involve explaining the content (What) and application (How) of the solution proposed by the study group, and accepting inquiries from other classmates.

Publishing results encourages students to identify and solve problems, and publish articles, reports, and participate in professional competitions.

Problem-oriented learning and action-oriented learning allow learners to identify and solve problems, using scientific methods for final reports. The content needs to identify certain problems and propose solutions.

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