

Innovative Research on the Training Mode of Applied Talents in Logistics Management Based on the Integration of Production and Education and Collaborative Education

Jinting Wang
School of Management
Dalian Polytechnic University
Dalian, China

Abstract—The integration of production and education, school-enterprise cooperation is an important way to realize the self-development of undergraduate universities and serve the local economic development. It is also a breakthrough to adapt to the development needs of modern society and cultivate high-quality applied talents. It plays a key role in education research and talent training in universities. Based on the concept of integration of production and education and the concept of collaborative education, this paper makes an innovative research on the training mode of logistics management professionals, puts forward the overall design ideas of the applied talent training mode, and comprehensively explores the school-enterprise collaborative innovation and applied talent training mode.

Keywords—*Integration of production and education; Collaborative education; Collaborative innovation; Applied talents*

I. THE SIGNIFICANCE OF THE INNOVATION OF THE TRAINING MODE OF APPLIED TALENTS IN LOGISTICS MANAGEMENT WITH THE INTEGRATION OF PRODUCTION AND EDUCATION AND COLLABORATIVE EDUCATION

The educational concept of integration of production and education and school-enterprise collaborative education is the main driving force for the applied transformation and talent training reform in universities. With strong practicality and outstanding comprehensiveness, it is particularly important to improve the quality of undergraduate applied talent training. In order to conform to the new trend of applied transformation development, the logistics management major of our university carries out applied transformation in an all-round way and proactively explores the new mode of training applied talents. This major actively carries out school-enterprise cooperation, attaches importance to the construction of off-campus practice base, constructs practice innovation platform, and explores the collaborative innovation mode of school-enterprise cooperation and applied talent training. At the same time, it deepens the integration of production and education, relies on the cooperation between schools and enterprises, explores the strategies and ways of school-enterprise collaborative education under the applied talent training mode, accelerates

the pace of applied transformation, and promotes the innovation of applied talent training mode. It comprehensively improves the comprehensive practical skills and innovative entrepreneurship of logistics majors, enhances students' ability in employment and improves the quality of applied talent training.

II. THE OVERALL DESIGN IDEA OF THE INNOVATION OF APPLIED TALENT TRAINING MODE OF LOGISTICS MANAGEMENT WITH THE INTEGRATION OF PRODUCTION AND EDUCATION AND COLLABORATIVE EDUCATION

1. Identifying the direction and defining the training goals of applied talents. With the goal of "application", the talent training program should be improved, and the talent training mode of "emphasizing characteristics, enhancing practice and being good at innovation" should be constructed to improve students' practical application ability and innovation and entrepreneurship ability.

2. Deepening the integration of production and education, building a collaborative education platform, and exploring the collaborative innovation of school-enterprise cooperation and applied talent training mode. We should integrate social resources and industrial resources to closely integrate local economic development needs, and jointly innovate the training mode of applied talents.

3. Exploring the strategies and approaches for the training of applied talents in the integration of production and education, school-enterprise cooperation and collaborative education. Based on the principle of "demand orientation, comprehensive opening up, deep integration and innovation leading", we should improve the application education system, and explore the school-enterprise cooperation and collaborative innovation education mode.

4. Establishing an effect evaluation system of school-enterprise collaborative innovation and applied talent training. The evaluation and assessment is conducted with students as the main body and whether students' practical ability is improved or not, and the effect of the training mode of applied

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talents under the school-enterprise cooperation and collaborative education is evaluated.

III. DISCUSSION ON THE INNOVATION OF APPLIED TALENTS TRAINING MODE IN LOGISTICS MANAGEMENT WITH THE INTEGRATION OF PRODUCTION AND EDUCATION AND COLLABORATIVE EDUCATION

A. *Building a Whole-course Practical Teaching System and Increasing the Curriculum System Construction for Training Innovation and Entrepreneurship*

The logistics management profession creates a curriculum system consisting of "professional quality + professional core competence + post competence + innovation and entrepreneurship ability", a career-oriented whole-course practical teaching system, and an innovative entrepreneurship training.

1) *Constructing a whole-course practical teaching system based on career orientation.*

In the revision and adjustment of the talent training program, 8-12 hours of practice are added to all core professional courses. This will increase the intensity of practical teaching, change the situation that pure theoretical courses account for the mainstream, and pure theoretical hour accounts for a higher proportion. All the theoretical courses are provided with practical experimental links and class hours to achieve the required practice in each subject, consolidate professional skills, and strengthen the exercising and training of students' practical ability. The whole-course practical teaching system runs through the four years of university, forming a complete and uninterrupted whole-course practical teaching process. At the same time, we should reform centralized practical teaching and strengthen the core competence of posts. We can focus on the purpose, content, form and time of the course, introduce the operating software commonly used in many enterprises, and conduct professional teaching simulation exercises. Besides, we can offer sand table simulation training for logistics management major and comprehensive training for logistics simulation, and strengthen the professionalism and application of course simulation practice.

2) *Increasing the construction of the curriculum system construction for training innovation and entrepreneurship.*

In the process of training applied talents, the logistics management major attaches great importance to the construction of the curriculum system for training innovation and entrepreneurship. It offers courses such as SYB, entrepreneurship management and entrepreneurship training, increases the number of theories and practical training courses related to innovation and entrepreneurship, and strengthens the training of students' innovation awareness and innovation and entrepreneurship ability. It organizes students to participate in business plan competition, college students' innovation and entrepreneurship training program, student innovation cup, entrepreneurship star and other innovation and entrepreneurship competitions. In addition, it simulates entrepreneurial education activities such as business operation,

so that the study of innovation and entrepreneurship theory can be applied and extended in practice.

B. *Integrating Educational Concept and Corporate Concept, Collaboratively Innovating the Applied Talent Training Mode of Logistics*

1. Deepening the integration of production and education, strengthening the school-enterprise linkage, reforming and innovating applied talent training mode. We should actively encourage teachers to practice in enterprises, encourage students to enter enterprises, and establish connections with enterprises, so as to form a model of teacher practice -- student practice -- student employment. At the same time, we can employ a large number of industry and enterprise bosses as part-time professors, intern tutors, thesis tutors. They can undertake course teaching and internship practice guidance, provide social oriented training and services for students, and realize the "win-win" cooperation mechanism between the university and the enterprise.

2. Actively integrating existing local and industrial advantageous resources, accelerating the establishment of long-term cooperative relations between logistics management major and Dalian Port, logistics enterprises and Dalian Logistics Association, building internship platforms for students, creating practice opportunities and internship conditions, and providing internship and employment opportunities.

C. *Improving the School-enterprise Collaborative Education System, Building a Collaborative Education Platform, and Constructing a School-enterprise Collaborative Education Mode*

1) *Improving the long-term mechanism for school-enterprise cooperation, establishing a school-enterprise cooperation steering committee, building a sound school-enterprise cooperation system, standardizing school-enterprise cooperation behavior to safeguard the interests of both parties, and achieve school-enterprise collaborative two-way education.*

2) *Collaborating to build the major between schools and enterprises and building special majors.*

We can explore a variety of school-enterprise cooperation methods and hire business experts as course teachers. The university and enterprise jointly recruit students and jointly design talent training programs. The university and enterprise jointly build strong and special advantageous majors, construct and highlight the characteristics of the professional talent training engineering and form the distinctive advantages of the talent training mode.

3) *Collaboratively reforming curriculum system between schools and enterprises, and co-editing teaching materials.*

Schools and enterprises jointly explore and reform the curriculum system, modify the curriculum syllabus, develop new courses, and increase the opening of practical business courses. Schools and enterprises jointly edit special textbooks that can closely integrate enterprise applications and adapt to the application of talents in logistics management.

4) *Cooperating between schools and enterprises to build internship training bases both inside and outside schools to improve education effectiveness.*

School-enterprise "co-construct, co-manage, co-use and share" the internship training base synchronized with the enterprise, train and cultivate students' professional quality and practical skills. They set up a "double-qualified and double-capacity" teaching team with practical work ability and rich work experience related to the major, and build the platform of subject development and research as well as student skills competition.

5) *Cooperating between schools and enterprises to construct teaching team to improve teaching quality.*

The cooperative enterprise is used as a platform to build a teaching team that combines "full time and part time". Professional leaders are held by experts in the school, and professional heads are held by backbone teachers, part-time professional fore-goers are held by enterprise experts, and part-time professional heads are held by enterprise technical backbones, so as to improve the overall quality and teaching level of the teaching team.

6) *Cooperating between schools and enterprises to build orders, orientation classes, and docking to train applied talents.*

Through the joint enrollment, the school and the enterprise jointly set up orders and orientation training classes. The school conducts planned and targeted training according to the talent training objectives and knowledge ability structure proposed by the enterprise. This enables students to directly enter the enterprise after graduation, ensure the smooth output of talents, realize the sharing of school-enterprise resources, effectively promote the employment rate of graduates and improve the quality of employment.

D. Constructing an Evaluation System for the Innovation Effect of Applied Talents Training in Logistics Management

Based on the scientific and reasonable evaluation method, the logistics management major develops a complete evaluation system for the training effect of school-enterprise cooperation and collaborative education applied talents. The evaluation system is divided into two parts: student achievement evaluation and enterprise satisfaction evaluation.

1) Student achievement evaluation

Student achievement evaluation is to see whether the entire training process has reached the set training goal. Through the classroom evaluation, curriculum performance, certificate examination, participation in practical activities of students, and other on-campus tracking, a comprehensive evaluation can be given. When students graduate, they must evaluate their achievement completion status, and the instructor will perform a rating evaluation, including student mutual evaluation. The final achievement score is weighted and summarized by self-evaluation, teacher evaluation and student interaction evaluation to complete the school evaluation.

2) Enterprise satisfaction evaluation

Off-campus employers need to provide feedback on the graduates and give objective ratings and evaluations. It includes students' ability to adapt to work, master and apply professional knowledge as well as practical operating ability. Through the results of enterprise satisfaction evaluation, the school understands the gap between school training and social needs, and better perfects the talent training system so that students can meet the needs of society and enterprises to a greater extent.

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