

# **Logistics Professional Talents Training of Application-oriented Universities Based on Production-Teaching -Research Synergetic Education**

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**Keywords:** Synergetic education; Smart logistics; Applied talent; Logistics professional

**Abstract.** With the rapid development of the logistics industry, the lack of high-quality and complex logistics personnel has become one of the bottlenecks restricting the healthy development of the logistics industry. Local undergraduate colleges focusing on cultivating application-oriented logistics professionals should actively explore the cooperative mode of production, study and research, vigorously promote the deep integration of “production, study and research”, integrate multiple resources, and jointly cultivate high-quality logistics personnel.

## **1 Introduction**

In recent years, talent market analysis reports from various localities show that there is a large demand for logistics talents. In particular, there is a huge gap between smart logistics talents and smart talents who are familiar with advanced technologies such as the Internet of Things and cloud computing. However, at present, the logistics talents cultivated by many colleges and universities in our country do not conform to the social needs in terms of hierarchical structure. The cultivation of high-end talents for smart logistics is still at the exploratory stage. Local colleges and universities that focus on cultivating applied talents should make adjustments to current talent training methods, actively explore new ways of “producing, researching, and researching,” integrate multi-sources, and jointly cultivate high-quality composites suitable for social needs. Logistics professionals.

## **2 Supply and demand Analysis of Logistics Professionals**

### **(1) Large demand for logistics personnel**

With the development of e-commerce and O2O and other business models, the demand for logistics talents is increasing year by year, and logistics has become a key industry in China's employment. According to the talent market analysis report, the rising logistic distribution industry is in urgent need of a large number of different logistics management and logistics service talents. The training quantity of existing logistics talents can't meet the social needs, and the shortage of logistics talents in China is very serious.

### **(2) Significantly improved employing standard of intelligent logistics enterprises**

Promulgated by the state council on July 20, 2017, "a new generation of artificial intelligence development planning", emphasize represented by artificial intelligence wisdom logistics will become a new round of industrial revolution and the momentum of economic development. As the Internet of things technology, big data, the use of artificial intelligence in the field of logistics, logistics industry will gradually achieve intelligent configuration of logistics resources, intelligent optimization of logistics links, intelligent logistics efficiency. Big data and artificial intelligence have brought the logistics industry from shoulder to shoulder in the traditional mode, into a new era of technology-driven logistics. In the future, unmanned vehicles, unmanned aerial vehicles and unmanned warehouses will be widely used, which will replace manual work in many logistics operations. What enterprises really need now is a large number of high-caliber interdisciplinary talents who understand logistics business and are familiar with advanced technologies such as

Internet of things and cloud computing.

**(3) Outstanding structural contradiction between supply and demand of logistics personnel**

At present, the domestic logistics talent gap is around 30-500,000, and the structural contradiction between supply and demand of talents is obvious. It is difficult to find the high-end composite talents who are familiar with logistics management, computer technology, network communication technology, Internet of things architecture, etc., and are familiar with the process of modern logistics information. According to statistics, the gap between high-end talents and first-line skills is nearly 80%, and the senior logistics management talents meet the actual demand of enterprises less than 10%. On the other hand, although the total number of highly skilled logistics personnel increases year by year, the disconnection between the training of logistics talents and the needs of enterprises still exists. The quantity and quality of the output talents of colleges and universities are difficult to meet the real demand of enterprise development.

**3 Problems Existing in Logistics Professionals Training of Application-Oriented Universities**

Due to the applied undergraduate colleges and universities logistics management specialized opening time is not long, the subject and the training system is not perfect, and the domestic market demand for logistics talent changes quickly, makes the logistics of the growing problems of professional education.

**(1) Vague talent training target and inaccurate professional positioning**

Part of the local colleges and universities in developing logistics management professional talent training objectives and requirements in combination with the regional economic and social development, show the homogeneity problem training objectives, did not reflect characteristics. The lack of clear training objectives and professional orientation of talent cultivation is very different from the actual demand of logistics industry for innovative applied logistics talents, thus affecting the quality of talent cultivation.

**(2) Strong convergence of course setting and non-obvious specialty features**

First of all, most colleges and universities still use including public three general courses, professional basic course and specialized course curriculum system of higher education curriculum system, curriculum convergence is stronger, unable to be combined with local regional advantage reflects professional characteristics, talent cultivation is too broad and sweeping, difficult to service the local economy development. Second, the curriculum has not been able to keep pace with the development of logistics industry. Intelligent logistics, logistics work flow, the operation of logistics has a new changes, post function change, also added a variety of jobs demand at the same time, the course system has failed to make timely adjustment and reform according to actual situation.

**(3) Single practical teaching form and school-enterprise cooperation**

At present, there are two main forms of practical teaching in logistics specialty: the comprehensive simulation of campus and the practice teaching of external enterprises. In the practice teaching in the school, many local colleges are mostly limited funding for deficiencies, sites, equipment shortages or obsolete, software update slow, deficiency of professional teachers, training condition cannot meet the requirements of practice teaching; And outside school practice teaching, it is often because the company business is multifarious, or worry about students can not competent for urgent task, or want to use interns to reduce the personnel cost profit, etc., and often stop at the scene of the enterprises to visit, for teaching, simple labor level, the actual teaching effect is not good.

**(4) Teaching method and means are simple and the teaching effect is not significant**

Although in recent years, various universities are trying to adopt a new teaching method and means, case teaching and the multimedia method has been widely used, but the traditional teaching mode is still dominant, ignoring the cultivation and improvement of students' comprehensive ability, the teaching effect is not significant. And logistics management professional practicality strong, skills course and practice course is a teaching model of the teaching way, will not be used while in teaching with the help of discussion-based, heuristic teaching method, but still does not apply to

operational stronger practice course.

**(5) Lack of experienced and high-quality professional teachers**

Due to the strong practicality of logistics, it is more demanding for the professional teachers engaged in logistics teaching, which requires the quality of "double teacher". Professional teachers team, but the local colleges and universities are mostly of management, economics and other professional direction turned to the direction of logistics professional teachers, so on the depth and breadth of logistics management professional teaching does not reach the designated position, and the lack of practical management experience; In addition, the recruitment of off-campus teachers with logistics background is difficult to implement due to the requirements, funds and management.

#### **4 Countermeasures and Suggestions**

**(1) To actively promote the in-depth integration of production, learning and research**

Applied colleges and universities should actively with the government, enterprise, logistics association, social training institutions to work together, to cultivate talents social needed logistics as soon as possible, let the logistics education and industry development in the construction of talent seamless docking. Talent cultivation is inseparable from the two main bodies of schools and enterprises. Although colleges and universities are carrying out various forms of school-enterprise cooperation, the scope and depth of their cooperation are not enough. Therefore, it is necessary to continue to expand the close cooperation and deep interaction between the school and enterprises. On the one hand, to ensure that each teaching link with the participation of enterprises, including personnel training plan formulation, professional courses, textbooks, school education, the theory of classroom teaching, course practice, professional practice, link, jobs and employment after graduation information feedback and other activities; on the other hand, the school also to integrate their resources and advantages, and actively promote production, study and research, the initiative to provide enterprises with services, such as technology research and development and application, consulting, employee training, graduates to promote enterprise development strategy, etc.

**(2) To optimize the talent training scheme in combined with industrial demand changes**

Applied colleges and universities should be the same insight into different levels in colleges and universities, on the basis of professional training scheme, combined with the logistics industry development trend and the direction of regional economic and social development, the reasonable configuration and optimization of teaching resources, give full play to its own advantages, discipline construction and talent cultivation innovative applied the cultivation of high-quality talents clearly positioning, to develop distinctive talent training scheme. Professional construction steering committee should be established to invite experts from industry enterprises to jointly formulate and optimize talent training programs. Ask and listen to them in the personnel training specification, professional core ability, opinions and Suggestions in aspects of curriculum, the introduction of industry standards and professional qualifications, the science formulation and real-time adjustment of the talent training scheme.

**(3) To optimize the curriculum system according to characteristics of applied discipline**

The innovation curriculum system of "application-oriented teaching design + compound knowledge platform + customized application module" is actively constructed to meet the needs of enterprises and society. First of all, according to the characteristics of application-oriented undergraduate talents in the knowledge structure, the curriculum system structure is optimized, the foundation is the professional service, and the specialty is the applied teaching design idea for the service of the industry. Second, logistics professional is highly comprehensive and practical, and can require students in the field of logistics management in planning, management and information application aspects of work, so we must build complex knowledge platform, covering economics, logistics management, computer technology, network communication technology, the Internet architecture, law, marketing and other aspects of basic theory and knowledge; Thirdly, based on the specific needs of regional economic development and industry enterprises, a customized knowledge module is formed to train students to have some special professional abilities.

**(4) To innovate practical teaching mode and build practical training base**

a. Actively explore the modularized teaching mode of practice teaching. By using the principle of the system, considering industry demand and refine the core elements of the matching and the practice teaching link, in accordance with requirements of the school, and cooperation with enterprises to carry out docking, the practice teaching content into enterprise operation process, the formation of covering a broad scope, operation standardization of modular practice teaching system. Establish the “double teacher system”, to achieve better teaching results.

b. Universities can jointly build smart logistics education comprehensive talent training base with numerous enterprises. May, in accordance with the "resource sharing, complementary advantages, with “accountability, benefit-sharing” principle, to build simulation training planning and training rooms, B2C electrical business logistics center room, transportation scheduling training room, express operation training room, intelligent technology and equipment, training room, etc. The school and enterprise jointly formulate the construction plan of the training room integrating the new mode, new technology and new equipment, and strive for the synchronization of the training environment, even ahead of the enterprise. The school provides the venue and the overall schedule and implementation of the construction of the training room. Simulation planning software enterprises to provide training rooms, WMS system and other software systems, and automated sorting conveyor equipment, automated access equipment, shelf system, intelligent robot, such as hardware devices, and the whole process of the construction of whole journey to participate in the training room. In addition to professional practice teaching, the established training base can be used as an enterprise employee training, professional skill appraisal, technical service and other USES, giving full play to the effect of “production, learning and research”.

c. Increase the intensity of off-campus practice base construction, fully rely on the social strength, with more companies signed a cooperation agreement with actual content, ensure that students can “go out” to the enterprise real professional internship can improve professional skills.

**(5) To innovate teaching mode and realize intelligent teaching**

a. It is more flexible and conducive to the teaching mode of students’ learning by exploring heuristic teaching, role playing, project teaching and cooperative learning. Outstanding student’s main body role in teaching and teacher’s guidance, science inquiry as the main method of acquiring knowledge, stimulate students' learning interest and subjective initiative, to cultivate students thinking, analysis, problem solving and sustainable learning ability, in order to improve the teaching effect.

b. Try the mixed teaching mode, and build a smart learning environment by contextualizing digital resources. Colleges and universities support students to carry out mobile learning, personalized learning and inquiry learning, and form blended learning. With “wisdom logistics” as the theme, the realization of the classroom and college seamless docking, warehousing, transportation and other simulation teaching system in the simulation practice environment, teachers and students, real-time interconnection and feedback the practice results, achieved the integration of theory with practice, the wisdom of the integration of teaching and evaluation of teaching.

c. Promote the teaching mode of “combining teaching and learning in competition”, and improve students’ practical innovation ability. Relying on the "full open" type laboratory, set up diversified skills competition platform, organizes the student to participate in the national design competition, the national college students logistics supply chain operations management innovation competition and other kinds of course contests. In the teaching process, the logistics competition is introduced in the usual teaching, combining with the course content, parsing the title, and course can be incorporated into enterprise projects and social services, the integration of production, study and production, supplement each other. Through the teaching mode of “combination of teaching and teaching and learning in competition”, the students’ teamwork spirit and practical innovation ability are cultivated.

### **(6) To build a high-quality “double teacher” professional teaching team**

First of all, colleges and universities should provide competitive remuneration package, introduce the doctor of logistics and logistics professional teachers with rich experience in logistics industry. Second, take strong measures to improve teachers’ practical teaching ability as soon as possible by encouraging teachers to take interdisciplinary studies, domestic and foreign visits, and training and discipline competitions. Third, actively explore innovative talent cultivation and social services to combine the two divisions to cultivate new models. It is jointly established by the school master and the enterprise energy person to establish the “industry-university-research” double-division studio, and jointly undertake the guidance of students’ practical training, discipline competition and graduation thesis.

## **5 Conclusion**

Due to the applied undergraduate colleges and universities logistics management specialized opening time is not long, the subject and the training system is not perfect, and the domestic market demand for logistics talent changes quickly, makes the logistics of the growing problems of professional education. Universities should actively promote the in-depth integration of production, learning and research, optimize the talent training scheme in combined with industrial demand changes, optimize the curriculum system according to characteristics of applied discipline, innovate practical teaching mode and build practical training base, innovate teaching mode and realize intelligent teaching, and build a high-quality “double teacher” professional teaching team.

## **Acknowledgement**

In this paper, the research was sponsored by Ministry of Education Industry-University Cooperation Collaborative Education Project (Project No. 201702067027), Ministry of Education Industry-University Cooperation Collaborative Education Project (Project No. 201602028046), Ministry of Education Collaborative Education Project (Project No. 201702068055), Shandong Province Human & Social Science Program (Project No. 17-ND-JJ-15).

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