

# Collaborative Construction and Use Management of Production-education Integration Base of Modern Logistics Management

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## Abstract

As an important form of production-education cooperation, modern logistics management integration base is of great significance for improving the training of logistics management personnel and promoting the development of logistics industry. However, at present, there are still some challenges and problems in the collaborative construction and use management of the production-education integration base. In view of this problem, this study takes the collaborative construction and use management of the production-education integration base of modern logistics management as the research object, aiming to explore the effective path and strategy.

## Keywords

**Production-education integration; Production and education integration base; Logistics management.**

## 1. Introduction

Under the background of globalization and rapid development of information technology, logistics management has become an important part of promoting modern economic development and supply chain efficiency. In order to train logistics management talents to meet the market demand, the industry is increasingly aware of the importance of the integration of production and education. As an important platform for industry-university cooperation, the integrated base of modern logistics management connects educational institutions, logistics enterprises and relevant government departments closely, promoting the combination of knowledge and practice.

However, modern logistics management production-education integration base still faces a series of challenges and problems in the collaborative construction and use management. For example, the lack of unified cooperative construction mechanism and management standards leads to the lack of unity and coordination in the construction and management of the base; The lack of communication and cooperation among the participants makes it difficult to form an organic cooperation network. In order to solve these problems, it is necessary to carry out in-depth research on the collaborative construction and use management of modern logistics management base of production-education integration. Through exploring the theory and practice of base construction, the collaborative mechanism and management standard which meet the needs of market and education and training are established.

## 2. Overview of Logistics Management Production and Education Integration Base

### 2.1. Definition and characteristics of logistics management production-education integration base

#### 2.1.1. Definition of logistics management Production-education integration base

The integrated base of logistics Management production and education is a comprehensive practice base set up to promote talent training and industrial development in the field of

logistics management. The base is a comprehensive platform that collects resources from universities, enterprises and public institutions and government departments. It aims to promote the integration of logistics management education and practice through education, training and practice, strengthen industry-university cooperation, improve the quality of talent training, and promote the development[1] of logistics industry.

### **2.1.2. Characteristics of logistics management production-education integration base**

First of all, multi-dimensional practical teaching environment. Logistics management production and education integration base has perfect logistics facilities and practice environment. Students can learn all aspects of logistics management through practical operations and simulation exercises, such as supply chain management, warehousing and distribution, and transportation management. The bases are usually equipped with advanced logistics equipment and software systems, enabling students to experience the practical operation of logistics management firsthand and master related skills and knowledge[2].

Secondly, there are rich industry-university cooperation projects. Logistics management production and education integration base closely cooperate with enterprises to carry out industry-university cooperation projects. The base establishes cooperative relationships with enterprises in the logistics industry to jointly carry out research and practical projects. These collaborative projects can provide students with practical internships, exposing them to real logistics management problems and working with business professionals to solve them. Through industry-university cooperation with enterprises, students are able to better understand industry needs and practical requirements and improve their competitiveness in employment.

## **2.2. Classification and example of logistics management production-education integration base**

According to their different functions and fields, the logistics management production-education integration base can be divided into the following categories:

### **(1) College and university cooperation base**

These bases are practical training bases jointly built by higher education institutions and logistics enterprises, aiming to provide practical opportunities and vocational training for students of logistics-related majors. For example, a certain university cooperates with a local logistics enterprise to establish a logistics training base, making full use of the enterprise's resources, setting up an actual operating environment, simulating real logistics scenarios, and providing professional training and practice opportunities.

### **(2) The government supports the demonstration base**

Such bases are set up under the leadership of the government to promote the development and upgrading of the local logistics industry. The government will provide financial and policy support, establish demonstration bases, and provide training, consulting and technical services for logistics-related enterprises. These bases are usually equipped with complete logistics facilities and laboratories, and are dedicated to promoting the information-based, intelligent and green development of logistics. For example, a logistics innovation demonstration base set up by a city government provides support such as technical consultation and intelligent transformation for local logistics enterprises.

### **(3) Cooperation bases for industry associations**

This kind of base is jointly built by logistics industry associations and enterprises, aiming at improving the quality and ability of logistics practitioners. The association is responsible for the construction and management of the bases, and provides services such as industry training and professional certification. For example, a logistics association cooperates with a number of

logistics enterprises to jointly establish a logistics management talent training base to provide systematic training and career development opportunities<sup>[3]</sup> for industry personnel.

### **2.3. Function and advantage of logistics management production-education integration base**

Logistics Management production and education integration base provides students with practical operating environment and practical opportunities, so that they can apply theoretical knowledge to practical situations. Through practical education, students can better understand and master all aspects of logistics management and improve practical operation skills. On the other hand, the base can provide professional training and continuing education opportunities for logistics practitioners. Through training, practitioners can update their knowledge and technology, and enhance their work ability and competitiveness. Based on the actual needs of the industry, the base sets up corresponding training courses and practical training programs to help employees solve practical problems<sup>[4]</sup>.

## **3. The Practical Dilemma of Collaborative Construction and Use Management of Modern Logistics Management Base Integrating Production and Education**

### **3.1. The cooperation model is not perfect**

When the cooperation model is not perfect, universities and enterprises may not have a common clear goal and plan in the construction and development of the base. The two sides have differences on the positioning, development direction and resource allocation of the base, which makes it difficult to form an effective cooperation framework; And there may be an imbalance in resource input and sharing between universities and enterprises. For example, enterprises may invest more resources in capital, equipment and practice sites, while universities mainly contribute teaching and research resources. This imbalance results in inadequate integration and sharing of resources, which affects the synergy effect of the base.

First of all, the imperfect cooperation model leads to the ineffective integration of resources between the two sides. In the logistics management production and education integration base, universities and enterprises are the main body of cooperation. However, there are obstacles in resource integration between the two sides. Universities usually focus on teaching and research, with resources mainly devoted to academic fields, while enterprises focus on profits and market competition, with resources mainly devoted to business operations. If the two sides cannot form an effective cooperation model, it is difficult to share and make full use of resources, and it is impossible to achieve real syner<sup>[5]</sup>gies.

Secondly, an imperfect cooperation model leads to inconsistent goals and needs. Universities focus on student training and the output of scientific research results, while enterprises focus on market competition and profitability. The goals and needs of the two are often different, and conflicts of interests are likely to occur when the cooperation model is not perfect. For example, universities want students to have more practical opportunities, but companies may not be able to meet the demand or be unwilling to pay for it. Such inconsistencies make it difficult for cooperation to proceed smoothly, affecting the normal operation and development of the base.

### **3.2. Insufficient funds and resources**

The construction and operation of a perfect base requires a large amount of capital investment, including infrastructure construction, equipment procurement, personnel training and salary expenditure. However, many bases face the problem of insufficient funds to fully meet the needs of construction and operation. The lack of funding has resulted in bases being unable to provide sufficient academic resources, practice conditions and faculty, limiting the size and quality of

bases. Insufficient resources are also a serious problem. The logistics management base for integrating production and education needs sufficient resources, including practice sites, storage facilities, transport vehicles, advanced technical equipment and software systems. However, due to the limited nature of resources, many bases cannot meet the demand. The lack of resources results in the base being unable to provide sufficient practice opportunities and practice environment, which limits the cultivation[6] of students' learning and practical ability. Insufficient funds and resources have led to the aging of facilities and equipment at the base. Due to a lack of financial input and resource support, facilities and equipment at many bases cannot be updated and maintained in a timely manner. This not only affects the operational efficiency and quality of the bases, but also limits the learning and working conditions of students and staff. Aging facilities and equipment cannot meet the needs of modern logistics management, affecting the competitiveness and attractiveness of the base.

In addition, insufficient funds and resources have also affected the training and attraction of teachers. The base needs teachers and tutors with rich practical experience and expertise to guide students' learning and practice. However, due to the lack of funds and resources, it is difficult to provide competitive salary packages and good working conditions to attract and retain excellent teachers. This further affects the teaching quality of the base and the training effect of students.

### **3.3. The connection between curriculum design and practice environment is not close**

The practical environment does not match the course content. The construction of the practice environment may not be able to keep up with the requirements of the course design in time. For example, emerging logistics technologies or business models may be involved in the curriculum, but the practical environment of the base may not have the corresponding equipment or resources to support students' practical learning of these contents, resulting in a mismatch between the curriculum and the actual environment. This will prevent students from having an in-depth understanding and application of the latest logistics management methods and tools. They may not be able to operate and practice in real logistics scenarios and be able to face practical challenges and problems to solve. This will limit their development in terms of practical ability and application ability, and lack a deep understanding[7] of the actual operation and decision-making of logistics management.

Practical opportunities are lacking or limited. The lack of close connection between the curriculum design and the practical environment may lead to the lack of sufficient practical opportunities for students. If the practice environment of the base cannot provide sufficient practical operation scenarios or opportunities, students will not be able to truly experience the process and challenges of logistics management. This will limit students' development in terms of practical abilities and problem-solving abilities. In addition, the mismatch between curriculum design and practical environment may lead to damaged cooperative relations between schools and enterprises. When enterprises participate in the construction of industry-education integration base, they expect students to have practical operation ability and problem-solving ability. If the practice environment of the base fails to meet these requirements, enterprises may be disappointed with the cooperation effect. This may weaken the trust and willingness to cooperate between schools and enterprises, which will have a negative impact on future cooperation projects.

### **3.4. Mismatch between talent cultivation and employment needs**

The skill requirements for talents in the logistics management industry are constantly evolving. With the emergence of emerging technologies and business models, the demand for talents with technical capabilities such as digitalization, Internet of Things and big data analysis is on

the rise. However, the training courses and teaching contents of some bases have failed to keep up with these changes in a timely manner, resulting in a gap between talent training and actual employment needs. The logistics management industry requires talents with cross-field knowledge structure and comprehensive abilities, such as supply chain management, warehousing and transportation, and quality management. However, the training mode of some bases is too specialized and lacks cross-field comprehensive training, which cannot meet the comprehensive ability requirements of the industry for talents.

The mismatch between talent training and employment demand will lead to the imbalance of talent supply and demand, affecting the smooth progress of the base's collaborative construction and use management. If the graduates cultivated by the base cannot meet the actual needs of the industry, employers will have difficulty finding suitable talents who meet their own requirements. This may lead to a decline in the employment rate of graduates at the base, unstable employment of enterprises, and lower the reputation of the base and willingness to cooperate. At the same time, the imbalance between talent supply and demand will also affect the long-term cooperative relations between the base and vocational education institutions and enterprises, limiting the sustainable development of the base integrating industry and education.

Mismatched talent training and employment needs will also have a negative impact on the quality of education and teaching. If there is a gap between the training courses and teaching content of the base and the actual employment needs, students' learning and practical experience in the base cannot be closely combined with the real logistics management work. This will lead to a decline in the quality of education and teaching, and students' practical ability and problem-solving ability can not be effectively cultivated. Teachers and base managers may need to spend more energy and time on curriculum adjustment and improvement of practice links to make up for the impact of the mismatch between talent training and employment needs, and enhance the pertinence and practicality[8] of education and teaching.

#### **4. The Perfect Path for The Cooperative Construction and Use Management of Modern Logistics Management Integrated Base of Production and Education**

##### **4.1. Improve the mode of cooperation**

In the collaborative construction and use management of the production and education integration base of modern logistics management, improving the cooperation model is a key element to promote the cooperation of relevant parties and jointly promote the matching of talent training and employment needs. The improvement of the cooperation mode will help strengthen the close connection between the base, educational institutions and enterprises, improve the effect of collaborative construction and use management, and promote the effective connection between talent training and actual employment needs.

First of all, in the improvement of the cooperation mode, it is a key step to establish a stable cooperative partnership between the base, educational institutions and enterprises. All parties should fully realize the importance of collaborative construction and use management and enhance the awareness of cooperation. The establishment of long-term cooperative partnership can promote mutual understanding and trust between the parties, jointly formulate talent training goals and employment needs, and share responsibilities and obligations.

Second, the cooperation model needs to focus on information sharing and communication. By establishing effective information sharing channels and communication mechanisms, bases, educational institutions and enterprises can keep abreast of industry development trends,

technical needs and employment needs. This will provide basic data support, facilitate the adjustment of training courses and teaching content, and ensure the matching degree of talent training and employment needs. At the same time, information sharing and communication can also promote positive interaction and coordination among all parties, and promote the smooth progress of cooperation.

#### **4.2. Exploring multi-party cooperation and investment**

In the collaborative construction and use management of modern logistics management base integrating production and education, exploring multi-party cooperation and investment is an important way to promote the development of the base and improve the management level. By attracting multiple parties to participate and invest resources, the functions and resources of the base can be enriched, the quality of teaching and practice can be improved, and the coordinated development of the production-education integration base can be promoted.

Multi-party cooperation and investment will help enrich the teaching resources and facilities of the base. Logistics management is a comprehensive subject involving many aspects, which requires sufficient teaching resources and practice environment to support students' learning and practice. By attracting cooperation and investment from enterprises, industry associations, governments and other parties, advanced logistics equipment, technology and management experience can be introduced to provide the base with richer teaching resources and practice places. This will help improve students' practical ability and professional quality, and enhance the base's education and teaching effect.

Exploring multi-party cooperation and investment is the key measure to improve the cooperative construction and use management of modern logistics management production-education integration base.

First of all, private enterprises can be actively introduced to participate in the construction and management of the base, and share the responsibility and risk. This can be achieved through cooperation agreements, equity investment and other means to ensure a balance of interests of all parties. It can also engage in long-term strategic cooperation with enterprises to jointly formulate talent training goals, curriculum Settings and practical teaching arrangements to ensure the degree of matching between talent training and actual needs. In addition, the base's innovation capacity and the depth[9] of industry-university-research cooperation can be promoted by cooperating with enterprises to carry out research projects, technological innovation and solve practical problems.

Secondly, government support and investment should be sought. Government support and investment plays an important role in promoting multi-party cooperation and investment. The collaborative construction and use management of the base may require a large amount of capital input and policy support. Therefore, we can actively strive for government funds and policy support to support the construction and operation of the base. In addition, close cooperative relations can be established with relevant government departments, and active participation in policy formulation and planning can be sought for more favorable policy environment and policy support for the development of the industry-education integrated base. The support of the government can provide support for the base in terms of capital, land, tax incentives, etc., to promote the smooth progress of multi-party cooperation and investment.

#### **4.3. Establish a practice-oriented teaching model**

The establishment of practice-oriented teaching mode is one of the key paths to improve the collaborative construction and use management of modern logistics management production-education integration base. The traditional theoretical teaching mode is difficult to meet the demand for talents in logistics management practice. Under the practice-oriented teaching mode, the base, educational institutions and enterprises can better cooperate and promote the

effective matching of talent training and actual employment needs. The practice-oriented teaching mode focuses on cultivating students' practical application ability through practical cases and projects. As a practice base, the base provides a real logistics management environment and practical opportunities, enabling students to operate and solve problems in real scenarios. Educational institutions introduce students into practical activities such as internships at the base and participation in project implementation by combining practical teaching with theoretical courses. Enterprises can provide real cases and projects to participate in solving practical problems with students. Through practical cases and projects, students can gradually cultivate the practical application ability required for logistics management in practice.

Practice is the core of the practice-oriented teaching model, so it is crucial to establish a challenging and practical practice link. First of all, we can cooperate with logistics enterprises to jointly design projects or cases with practical application significance, including supply chain optimization, storage layout planning, transportation route optimization, etc. These practical projects can cover all aspects of logistics management and involve real data, situations and problems. Secondly, students can be actively organized to participate in practical activities, such as field trips, simulated operations and solving practical problems. Through these practical links, students can personally experience the challenges and operations of logistics management, and develop the practical ability<sup>[10]</sup> to solve problems.

#### **4.4. Strengthen docking and cooperation with enterprises**

Strengthening the docking and cooperation with enterprises is crucial to the collaborative construction and use management of modern logistics management production-education integration base. Logistics industry has a high degree of practicality and application, and close docking and cooperation with enterprises can effectively improve the teaching quality of the base, optimize the personnel training model, and realize the close connection between personnel training and actual needs.

Strengthening the docking with enterprises can help the base and educational institutions to understand the latest trends and needs of the logistics industry. By establishing contact and communication with enterprises, information such as the actual situation, development trend and technical needs in the industry can be obtained. Based on this, the base and educational institutions can adjust the teaching content and curriculum accordingly, ensure that the talents trained meet the actual employment requirements of the enterprise, and improve the pertinence and practicability of talent training.

The base can establish a stable school-enterprise cooperation mechanism with enterprises in the logistics industry. First of all, a school-enterprise cooperation framework agreement can be established to clarify the scope, goals and responsibilities of cooperation and ensure that the two sides have a clear consensus in cooperation. Secondly, a school-enterprise cooperation team can be set up, consisting of professionals from the base and the enterprise, to jointly formulate cooperation plans and implementation plans. Through regular meetings and exchanges, the team can closely track cooperation progress and solve problems and difficulties [11] in the cooperation process.

## **5. Conclusion**

It is an important way to promote the development of vocational education in our country that "the integration of production and education, the cooperation of school and enterprise to educate people". In the field of logistics management, students need to have practical operation ability and professional knowledge, and the integration of production and education can provide students with opportunities to contact with real work scenarios, and help students

apply theoretical knowledge to practice. At present, the integration base of production and education in modern logistics management still faces a series of challenges and problems in collaborative construction and use management: imperfect cooperation mode, insufficient funds and resources, poor connection between curriculum design and practice environment, and mismatch between personnel training and employment needs. In this regard, we should improve the cooperation mode, explore multi-party cooperation and investment, establish practice-oriented teaching mode and strengthen the docking and cooperation with enterprises.

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## References

- [1] Feng Zhengguo. Value Analysis of enterprise-school Students based on Case of Production-Education Integration [J]. Sichuan Labor Security, 2023, (10): 90-91.
- [2] Li Gaojian, Cui Ping, Hui Xiwen. [J]. Journal of Higher Education, 2023, 9 (30): 87-90.
- [3] Liu Xiayun, Mo Jiaye, Zhang Yanxia, Liu Jun. [3] The dilemma and countermeasures of the integration of industry and education in promoting high-quality employment and entrepreneurship [J]. China Modern Educational Equipment, 2023, (19): 152-154+158.
- [4] Li Xiongwei, Wei Jianjun. Logic, Value implication and implementation Path of Training Base Construction in Higher Vocational Colleges [J]. Journal of Jiangsu Polytechnic of Architecture, 2023, 23 (03): 37-41.
- [5] DING Liqun. New Connotation and Realization Path of Production-Education Integration and Collaborative Education in the perspective of New Logistics Infrastructure [J]. China Storage and Transportation, 2023, (06): 169-171.
- [6] Kong Fanshi, Hua Ping, Li Xiuling, Gu Zhongxiu. Exploration on the Construction of Training Base of Integration of Production and Education in Higher Vocational Colleges under "Four-chain" Collaborative Coupling [J]. Journal of Henan Radio and Television University, 2021, 34 (04): 75-79.
- [7] LIU Recordrecord. Exploration and Practice of University-Enterprise Linkage to build industry-University-research innovation Complex: A case study of Weifang Vocational College Intelligent Logistics Production-Education Integration Training Base [J]. Heilongjiang Human Resources and Social Security, 2021, (14): 127-129.
- [8] Xiao Fuxing. Research on the construction model of Production-Education Integration Training Base of Logistics Education in Xinjiang [J]. Quality & Market, 2020, (17): 66-68.
- [9] Jiang Xige. Research on the Construction of Industrial College Governance System from the perspective of Integration of Industry and Education [J]. Vocational and Technical Education, 2020, 41 (24): 30-34.
- [10] Xiao Fuxing. Study on the constraints and existing problems of establishing logistics Production-education integration training Base in Xinjiang [J]. Shanxi Agricultural Economy, 2020, (04): 24-25.
- [11] Wang P. Research on information-based Supply chain Collaborative Logistics Management [J]. Logistics Technology, 2023, 46 (22): 141-144.