

# The Course-certificate Integration in Logistics Management Based on “1+X” Certification

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Fund Project: 2020 annual project of the “13th Five-Year Plan” of Education Science in Shaanxi Province (No. SGH20Y1410), Research on the course-certificate integration curriculum system of application oriented colleges under the “1+X” certificate system, taking Logistics Management as an example.

**Abstract:** The “1+X” certification plays an important role in building the technical personnel training system, constructing the team of double-qualified teachers, promoting school-enterprise cooperation, and strengthening the social service function of universities. Aiming at the problems existing in the implementation of the pilot work of “1+X” certificate of logistics management, this paper puts forward an innovative plan of the course-certificate integration in logistics management program in application-oriented universities.

**Keywords:** Logistics Management; “1+X” Certification; Vocational Skills; Course-certificate Integration

## 1. Background

In February 2019, the State Council of China issued the “*National Vocational Education Reform Implementation Plan*”. This document proposed a comprehensive reform plan for vocational education. Vice premier of the State Council Sun Chunlan pointed out that vocational education and general higher education are two different types of education, with equal importance. “Promote the academic certificate plus vocational skill certificate (1+X certificate) system, encourage students to obtain vocational skill certificates while obtaining academic certificates, and expand their skills in employment and entrepreneurship.”

As of February 2021, the Ministry of Education has announced 22 vocational skills certificates. After 2021, the “1+X” certificate system will be gradually implemented nationwide, based on the experience of pilot work. As one of the first five pilot projects of vocational skills, many problems has been found in logistics management “1+X” certificate system in the past two years, which has accumulated valuable experience for the promotion of “1+X” certificate system in other areas.

## 2. Analysis of the implementation status of “1+X”certification

Started from the middle of 2019, the unified national examination for logistics management “1+X” vocational skill certification is organized by China Federation of Logistics and Purchasing. The exam have 3 levels, elementary, intermediate, and advanced. In 2020, due to the COVID-19 epidemic, seven tests were organized in June, July, September, October, November and December. More than 30,000 candidates participated in the tests at test centers across the country. The deficiencies found are as follows <sup>[1]</sup>.

### 2.1 The training for the certification is mainly short-term training

To ensure the progress of the “1+X” certification, most colleges and universities adopt short-term concentrated training

before the exam. Short-term training can increase the passing rate, however, the separation of certificate training and daily courses makes the “1+X” certification more like a test-oriented training, which completely violates the original intention.

## 2.2 The participation of front-line workers is not enough

The higher vocational education and application-oriented undergraduate education aim at finding jobs for students, and graduates must have vocational skills that meet the needs of society. However, in terms of training and examination content, the front-line workers of logistics industry enterprises have a low degree of participation, which cannot reflect the actual needs of enterprises. The training is mainly completed by school teachers, many of them do not have work experience for companies and have no idea with the actual working environment. Exam questions are also mainly given by logistics experts and university professors.

## 2.3 The social recognition needs to be improved

Logistics management “1+X” certification has been successfully implemented for almost two years, but the scope of application is relatively limited. When graduates are looking for jobs in 2019 and 2020, few enterprises set requirements and recognize the “1+X” certificate of logistics management, which makes the importance and value of the “1+X” certificate questioned, and many students are not motivated to sign up for it. Therefore, to improve the value of “1+X” certification and expand its application scope is the top priority of promoting the “1+X” certification in the future<sup>[2]</sup>.

# 3. The teaching methods innovation plan

Logistics management “1+X” certificate training is far from enough to rely on short-term training before the exam, it must be deeply integrated with daily courses. In the learning process of the basic courses, let students have a preliminary understanding of the assessment standards and requirements, consolidate and deepen them in the core courses and extended courses, then organize practical training and comprehensive improvement before the exam. Introducing, deepening and upgrading in a gradual way can not only guarantee the passing rate, but also realize the integration of daily courses and the vocational skill certification, which is helpful to enrich students’ professional knowledge and improve their vocational skills.

## 3.1 The vocational skills certificate examination outline

According to the outline of intermediate level of the logistics management vocational skill certification that most students participate in, it mainly include 10 modules, shown in Table 1.

**Table 1.** The outline of logistics management vocational skill certification (intermediate level)

Module	Examination content	Practical score	Theoretical score
1) Professional ethics, occupational safety awareness	Professional ethics and service awareness	/	6
	Environmental protection, occupational health and safety	15	
2) Basic knowledge of logistics industry	Basic concepts of logistics, supply chain management, organization, frontier development and innovation	/	10
3) Basic management skills	Document writing, self-management, communication and cooperation, work efficiency improvement, professional etiquette	/	8
4) Logistics industry innovation and entrepreneurship	Innovative thinking, establishment and operation of start-up enterprises in logistics industry	/	6
5) Logistics market development and customer management	Market research, customer development plan, project bidding, customer exception handling	20	15
6) Warehouse and inventory	Warehouse management, warehouse layout and logistics facility planning, inventory control	15	15
7) Distribution	Distribution route and optimization, distribution operation plan	10	6
8) Transportation	Transportation planning, scheduling, commerce and freight forwarding	20	14
9) Logistics cost and performance	Control logistics costs, performance management	20	10
10) Digitization and intelligence	Transportation management information system, intelligent warehousing system	/	10
Total		100	100

The occupational skills and work contents required in the examination outline are involved in the courses of logistics management programs in most vocational colleges and application-oriented universities. For example, the professional ethics, occupational safety and basic knowledge of logistics in module 1) and module 2) can be integrated into the introduction to logistics. The knowledge of logistics market development and customer management required in module 6) can be integrated into the logistics marketing. The contents of warehousing, distribution and transportation in modules 6), 7) and 8) can be further studied in warehousing management, transportation management and logistics system planning.

## **3.2 Implementation strategy**

The course-certificate integration is the future development direction of “1+X” certificate system, following 3 measures can be taken to realize the course-certificate integration.

### **3.2.1 Adjust the course list and re-formulate the syllabus**

The knowledge of logistics management vocational skill certification should be integrated into the syllabus and make the courses adapt to the needs of working environment. Let the enterprises deeply participate in the course contents and teaching methods reform. Learning from the benchmark enterprises in the logistics industry, and establish the task-based training mode based on the real production environment. Taking warehouse management in module 6) as an example, the intermediate exam syllabus requires the following abilities: the development of the warehouse operation plan, manage and coordinate resources; the development of the storage plan, determine the storage strategy; determine the inventory counting strategy and select the inventory counting method. The selection, use and operation of the tray is the focus of this module. We combined the warehousing operation of a large logistics enterprise, through the video and pictures on site, let students understand and master the relevant knowledge of pallets, and then let them complete the stacking of pallet goods within the limited time to simulate the actual working environment. If students received relevant training and obtained certificates, can be exempted from the corresponding courses or modules<sup>[3]</sup>.

### **3.2.2 Construct the double-qualified teaching team**

With the rapid development of logistics industry, teachers are required to continuously go deep into the frontline of enterprises to learn the latest technologies and to understand the practical problems encountered in the operation process. Therefore, like the establishment of student practice base, it is very necessary to establish teacher practice bases to improve teachers' teaching ability of combining theory with practice. At the same time, experts and highly skilled workers should be hired as part-time teachers, even if they do not have advanced degrees, to undertake practical training or to teach theoretical courses with full-time teachers.

### **3.2.3 Improve the quality of application-oriented textbooks**

Application-oriented universities and academic universities have completely different training objectives and must use differentiated textbook systems. At present, there are many kinds of application-oriented textbooks in the market, but most of them only did some simplification of the traditional books, haven't focus on cultivating students' working ability. Therefore, there is an urgent need for top university professors and front-line experts to compile textbooks that are truly suitable for application-oriented universities.

## **References**

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