Research on the Construction Practice of Modern Logistics Simulation Training Center Based on Internet of Things Technology in Higher Vocational Colleges

Hailin Chen
Wenzhou Vocational and Technical College, 325035, China

Abstract: Taking the construction of logistics training base of Wenzhou Vocational and Technical College as an example, aiming at the current situation and existing problems of logistics training base, this paper puts forward the technical scheme of modern logistics training base construction and Practice Research Based on physical network technology, including the goal of upgrading and transforming the overall scheme, the functional layout scheme and the main functional modules.

Keywords: Logistics; Training Base; Internet of Things; Construction.

1. Background and significance
In the report on improving the teaching quality of higher vocational schools put forward by the Ministry of Education in 2006, it is pointed out that higher vocational education is an important aspect of higher education. Its mission is to train students to take the construction of logistics training base in Wenzhou Vocational and Technical College as an example. In view of the current situation and existing problems of logistics training base, this paper puts forward a modern logistics training base based on physical network technology. The technical scheme of the field construction and practical research includes the goal of the overall scheme of upgrading and transformation, the functional layout scheme and the main functional modules. Sufficient to meet the needs of modern economic development with the corresponding skills of high-quality personnel. Compared with other existing forms of higher education in China, a remarkable feature of higher vocational education is that it pays attention to the cultivation of practical ability of talents, which determines that practice in teaching process is an important part of talent cultivation. At the same time, the Ministry of Education pointed out that for the practical teaching links of Higher Vocational colleges, we should do a good job of practicality in the teaching process on the basis of system design. At the same time, it advocated that under the premise of
providing venues in schools, relevant enterprises could provide education and training mode combining equipment with teachers.

The outline of China's medium and long-term education reform and development plan points out that "building a modern vocational education system, vigorously developing vocational education and strengthening the overall planning and construction of training centers". According to the industry and industry categories, we should integrate the resources of training centers, construct the training system of Vocational Education in provinces, cities and schools, and focus on supporting the construction of public training bases in schools. At the same time, we should build regional public training centers, enterprise training centers, student entrepreneurship centers and other training platforms with the help of industries and enterprises. It can be seen that the design of practical teaching links in line with the talent training model of higher vocational colleges is one of the important measures to promote the sustainable development of Higher Vocational education.

The construction of modern logistics simulation training center based on Internet of Things technology should be as close as possible to the front line of logistics operation, embody the real logistics activity environment as possible, and embody the new technology and technology in the field of logistics specialty. In the construction process, new construction and expansion should be combined to form "logistics technology demonstration-basic operation skills training-post skills training-logistics project development and service". Line of modern logistics simulation training room system. After completion, it should not only become a training place for students to contact with advanced logistics technology and equipment, but also a training base for professional qualification appraisal of enterprises and management, as well as a base for serving local economic development.

According to the training goal of logistics high-skilled personnel and the direction of modern logistics development, the overall goal of the construction of modern logistics simulation training center based on Internet of Things technology is to optimize the allocation of training resources, create a working atmosphere, construct training situation based on real projects, reform training mode and innovate evaluation according to the principle of "practicability, economy, advancement, security and systematicness". According to the requirement of price system, the proposed training base and the established training base should be integrated to create a vocational skill training base with advanced and reasonable hardware and leading software, which represents the development trend of logistics management. It has typical working process, full working content, strong professional atmosphere, complete and practical functions, close combination of production and learning, standardized management and high efficiency.
Higher vocational colleges are obliged to cultivate excellent skilled talents suitable for industries and enterprises for the society. Skilled talents should not only master solid theoretical knowledge, but also practice on the basis of theory, enhance practical ability and combine theory with practice. Therefore, it is very necessary for schools to construct practical teaching places related to majors to carry out practical training courses for students.

1.1 National strategic requirements
In the Outline of the Twelfth Five-Year Plan for National Economic and Social Development of the People's Republic of China, the Central Committee clearly put forward the following proposals: to promote the development and application of the Internet of Things; to expand the opening up of services such as finance and logistics; to develop service outsourcing; to steadily open up the fields of education, medical treatment and sports; to introduce high-quality resources; and to improve the level of internationalization of services. This is the first time that the "Internet of Things" has been written into the government work report, which also means that the development of the Internet of Things has entered the national perspective, bringing huge opportunities for the development of China's Internet of Things industry.

1.2 It plays an important role in training high-skilled logistics personnel to serve regional economic construction
The reform and development outline of the National Development and Reform Commission points out that efforts should be made to promote the development of logistics industry and give priority to its development. In 2010, Zhejiang Province further put forward the requirement that logistics industry should be the top six industries in the province. At the same time, in the logistics development plan of Wenzhou in 2012, Wenzhou put forward the requirement to build the city into a distribution center in southern Zhejiang in about ten years, and further build the logistics industry into one of the main industries of Wenzhou. In view of the above understanding, we can see that in terms of logistics professional education, while improving the quality of professional and technical personnel, improving their professional practice ability has a very important impact on promoting local economic development.

1.3 Promoting the Construction of Logistics Major in Higher Vocational Education in Zhejiang Province
According to the latest national statistics, the shortage of logistics talents has reached 6 million by the end of 2016. Due to the rapid development of logistics industry in
Zhejiang Province, especially in southern Zhejiang Province, a huge shortage of logistics talents has been formed. Higher Vocational Colleges in Zhejiang Province have actively opened logistics specialty. From the professional level, these newly-built logistics specialties are still at a low level of development, and the logistics specialties carried out by higher vocational colleges in the province are not key specialties. Many higher vocational colleges are weak in professional construction, and the construction of productive training rooms is imperfect. They fail to make breakthroughs in students' employment orientation, professional skills and professional quality training, which results in narrow knowledge and employment of students. The main way to cultivate logistics talents in Colleges and universities is to cultivate logistics talents on a large scale. However, Logistics Specialty in Colleges and universities in China is generally set up late. Students usually have six months to one year's job-hunting period after graduation. It takes one to two years to get into a stable period before enterprises can boldly cultivate Logistics talents, which will lead to a very lack of logistics talents at present. From the point of view of demand position, the development of logistics industry mostly focuses on port and highway transportation, warehousing, procurement, distribution and so on. According to the survey of the proportion of logistics talents'demand, as shown in the table, most of the logistics posts recruited are purchasing, transportation, warehousing and distribution. This kind of Posts emphasize working experience, so the actual operation ability of logistics talents is more valued. Therefore, it is very necessary to establish logistics training centers for Logistics Specialty in Colleges and universities for logistics practical operation training.

Through in-depth research in enterprises and brothers'colleges, and on the basis of previous experience and lessons learned, the business management specialty of our department proposes to build a modern logistics simulation training center based on Internet of Things technology, so that students can also experience the real atmosphere of logistics enterprises in the classroom, and get in touch with the logistics operation process simulating the real situation, thus achieving the goal of "training, research and creation". The purpose of integrated school management is not only to increase students'professional knowledge, but also to further enhance their professional skills in logistics management posts, so that students can truly become high-quality skilled talents who can quickly adapt to the needs of modern society. This measure has played a good reference and promotion role in the construction of logistics management specialty (direction) in Zhejiang higher vocational colleges.
1.4 Providing Guarantee for Higher Vocational Education to Promote Social Service Ability

Social service capability refers to the ability of logistics training room to effectively provide corresponding guarantee for the sustainable development of local society in combination with its own characteristics and advantages. As far as higher vocational colleges are concerned, they can provide relevant skills training for employees and social personnel of logistics enterprises and professional skills appraisal for the society by integrating school teachers and advanced modern logistics training rooms. The technical service platform cooperated with enterprises can be built in the school's logistics training room, providing technical services to the society and promoting the transformation of scientific research results; using the excellent teachers' resources of the school to provide teacher training for the logistics teachers of secondary vocational and technical institutes and higher vocational and technical institutes in the province and even in China, participating in the development and formulation of vocational education standard bricks, and effectively integrating them. We should encourage cooperation with foreign countries, promote the integration of mutual resources and enhance our own level of running schools, increase students'double certificate holdings by relying on logistics training centers, and provide professional appraisal for the society by relying on teachers and equipment. Therefore, the construction of modern logistics training center is the guarantee to improve the social service ability of Higher Vocational colleges.

1.5 Students' employment prospects are broad

With the explosive expansion of the Internet of Things market, the demand for talents in the Internet of Things industry is expected to increase annually in the next 10 years. In the 12th Five-Year Plan, the key areas of the Internet of Things industry include intelligent transportation, intelligent logistics, smart grid, intelligent medicine, intelligent industry, intelligent agriculture, environmental monitoring and disaster warning, smart home, public safety, social public utilities, finance and services, smart city, national defense and military, etc. According to the latest data of China Logistics and Purchasing Association, in 2018, China's core technology of intelligent logistics will form an industry with a scale of 300 billion yuan. The development of large international logistics ports in China includes Shanghai, Chongqing, Guangzhou, Shenzhen, Wuxi, Nanjing, Xi'an and Wuhan. By 2018, there will be a shortage of more than 500,000 technicians in modern logistics and intelligent warehousing. The huge market provides a broad employment prospect for the students majoring in enterprise management and marketing.
1.6 Demand for scale of social development
The application fields of the National Internet of Things Program include industry, agriculture, transportation, logistics and so on. Ye Tianchun, director of China Internet of Things Research and Development Center, said at the 2nd China International Internet of Things Congress held in Wuxi in late January that by 2020, 3.86 trillion yuan would be used to promote the industrialization of the Internet of Things; in 2017, the whole market would reach 600 billion yuan.

2. Review of the Research Status of the Same Kinds in China
The construction of domestic logistics training room has gone through three stages: the first generation is Process-based Software Training room, which is based on logistics management software and supplemented by simple logistics equipment to meet the teaching needs of simple logistics equipment recognition and operation of logistics software; the second generation is discrete hardware training room, which introduces the transformation of industrial equipment into the training room and basically covers the needs of logistics activities. The third generation is the centralized comprehensive training room, which integrates software and hardware on the basis of the first two generations, builds the actual framework of logistics operation and pays attention to the integrated operation. In the past ten years, logistics training teaching relies more on hardware equipment operation and software data processing than on its overall operation and management. With the deepening of the reform of logistics teaching, higher vocational colleges have put forward new requirements for logistics training teaching. It is difficult to adapt to the requirements of teaching simply by operating and simple process training. More and more feedback information shows that logistics training teaching can effectively achieve the goal of training logistics talents only when it changes from knowledge and operation to management-oriented.

There are few studies on the construction of logistics training base at home and abroad. Because the construction of logistics training base must combine local economy, policy and school professional orientation, resources and their own conditions, the requirements for the construction and function of training base are different. Due to the late start of the construction of logistics training rooms in China, there are some shortcomings in both the layout of training rooms and the management of training rooms.

2.1 Single textbook construction
Textbooks are the basis of teaching and should be unified throughout the country. At present, there are many versions of logistics textbooks in our country, such as American, Japanese and British, which are very informal. There are contradictions
among them, some textbooks have serious misconceptions; some textbooks are not related to logistics; most of them are software operation textbooks, while few are physical operation textbooks. There are few logistics training centers based on Internet of Things intelligent technology. The emergence of these problems can be summarized as follows. Firstly, nowadays, there are few teaching research in the training center of Internet of Things technology, and relevant experts in the industry have only recently begun to pay attention to teaching exploration. Second, colleges and universities need to build corresponding logistics training centers in order to carry out logistics training. Building logistics training centers needs to invest a lot of money.

2.2 Equipment construction is relatively backward
The construction of logistics equipment and facilities is the guarantee of logistics training. At present, logistics training centers have been built in most colleges and universities. However, the teaching system of logistics training needs to be improved. Logistics professional instructors still need to increase the practical operation experience of enterprises. Internet of Things Laboratory has been set up in research universities such as Shanghai Jiaotong University, but the training room of Internet of Things (logistics direction) is seldom constructed in universities at present. With the application of Internet of Things technology in logistics in the future, the Internet of Things (logistics direction) training room must be set up in logistics specialty, otherwise the students trained by colleges and universities will have no social competitiveness. There will be logistics students who do not understand the application of Internet of Things technology in logistics and will not operate. Therefore, the construction of logistics simulation training center based on Internet of Things technology is very necessary.

2.3 There are loopholes in the management of training room
The management of the training room mainly includes equipment management, personnel safety management and student-assisted teaching management. The hardware equipment of the training room is usually large-scale equipment. If there is no specialized personnel to check it regularly, it will cause equipment failure, affect the practice teaching and even cause potential safety hazards. At the beginning of practical teaching, few schools carry out safety regulation education and operation regulation education for students, which results in students' operational errors and crises their own safety. In the aspect of assistant teaching management, teaching teachers have weak practical ability, lack of full-time experimental technicians, unclear division of management and so on.
2.4 Slow updating of equipment
Due to the rapid development of logistics industry, software and hardware update speed is faster. In the initial stage of construction, the training room has a huge amount of investment, lacks the overall management of funds, does not take into account the maintenance and update of software and hardware in the later stage, which not only has security risks, but also causes the existing experimental facilities to lag behind the rhythm of the actual logistics development.

2.5 Poor resource sharing
Logistics is a comprehensive subject, involving e-commerce, transportation, mechanical design and manufacturing, automation, computer science and technology and other related majors. Therefore, the training room should take this into account at the beginning of construction, and the selection of equipment should take into account the multi-disciplinary teaching.
In China, representative logistics training rooms, such as Huzhou Institute of Technology, have proposed that logistics production training bases include four centers and seven districts based on the "school-enterprise cooperation, work-study integration" talent training model. Four centers are: skill appraisal station (point), vocational skill training center, logistics consulting and planning service center, innovation and entrepreneurship education service center. Seven districts are logistics culture and sand table deduction training area, warehousing and distribution training area, manufacturing logistics training area, logistics information training area, chain operation training area, express logistics training area and logistics business training area. Hubei City Construction Vocational and Technical College proposed that the modern logistics training center consists of four parts: modern logistics software training room, chain operation training room, GPS/GIS training room, warehousing and distribution training room.
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3. The main problems of logistics training base at present
The logistics training room of Wenzhou Vocational and Technical College began to be planned and constructed in 2009. It already has the most basic facilities and equipment such as heavy shelves, ground cattle, stacker, bar code and scanning guns, pallets and packing boxes. Over the past five years, the use of the training room in professional training courses has provided a solid practical basis for further upgrading of the system, increasing informatization capacity and upgrading management from the perspective of supply chain. With the rapid development of communication and information technology, the development of intelligent logistics has been greatly accelerated. The existing hardware of the training center has lagged behind and it is difficult to train comprehensive talents. At present, the equipment and facilities can only meet the basic training of students' logistics, and the operability and practicality are only close to the basic post requirements of enterprises. They can not meet the development needs of the current supply chain intelligent logistics.
The whole training room lacks the connection of the whole supply chain process; The hardware and software are disjointed, and there is no overall information flow and database.
There is no correlation among the modules, and the island operation is obvious.
The resources available for the training course are limited, and the efficiency of the training room is low.
Lack of fluent shelves, electronic sorting, attic shelves, three-dimensional storehouses, Roller sorting line, stacker, automatic baler, warehouse management system software, handling robot, AGV, intelligent forklift, intelligent shelf, RFID system, supply chain management system, visualization, visualization device and technology;
The extensibility and extensibility of different professional applications are seriously inadequate, such as logistics training and lean production, Internet of Things, big data,
intelligent manufacturing, and intelligent factory training are designed and used independently, unable to realize the sharing of school resources, and unable to meet the needs of scientific research, off-campus training, school-enterprise cooperation and so on.

In order to solve the above problems, this paper designs the upgrading and reconstruction scheme of logistics simulation training base based on the idea of Internet of Things, increases the integrated application of lean production/intelligent factory, automation, information warehouse distribution logistics and e-commerce retail logistics technology, and makes full use of the existing equipment base and the five-year practice results, so as to reduce the construction cost of the transformation from modern training center to intelligent logistics.

4. Construction Scheme of Modern Logistics Simulation Training Center Based on Internet of Things Technology

4.1 Main research contents

The construction of modern logistics simulation training center based on Internet of Things technology should cover the most basic logistics functions such as production, warehousing and distribution. At the same time, based on the specialty direction of business management and the characteristics of regional logistics industry in our department, it should also include some contents such as future supermarket of Internet of Things. While meeting the training practice, it should also promote local logistics-related industries and employment. For support. Modern logistics simulation training center based on Internet of Things technology embodies many aspects of teaching contents such as logistics basic teaching, macro-cognitive experiment, logistics technology mastery, logistics information system teaching, etc. and various means such as media, information, physical objects, practice, etc. in the course. It can also integrate the needs of enterprises and the logistics courseware compiled by teaching practice to make these regions, equipment and systems. Effective cohesion, so that students personally participate in the operation, experience and grasp the logistics operation of each post skills, process requirements and the overall system overview, so as to achieve the ultimate goal of training skills and improving quality.

4.2 Goals

The modern logistics simulation training center based on the Internet of Things adopts a new teaching method. By combining the advantages of computer hardware and simulation software, the platform software of on-campus training is built, which successfully solves the difficulties of on-campus practice and makes up for the shortcomings of off-campus practice resources. This kind of teaching mode is quite
different from the traditional training course. It can effectively improve students' practical operation ability and social practice ability, and improve students' ability to observe, think, analyze and solve problems. In the process of talent cultivation, we should combine practice teaching with theory teaching closely, take theory teaching as the foundation, practice teaching as the carrier and stable practice teaching (experiment, training, practice) base as the basis, train students to become high-skilled talents with good comprehensive quality, which are welcomed by enterprises and society, and build our university as the training medium of modern high-skilled talents in Wenzhou area. Land.

In the construction of modern logistics simulation training center based on Internet of Things technology, the first task is to select suitable simulation software. The simulation software is to make full use of the computer simulation technology, based on the representative enterprises (factories, construction sites, departments, parks, etc.) which cover all the contents of the teaching design, and the ideal on-site teaching environment characterized by outstanding teaching and training. It focuses on the construction of high simulation, high interaction and intellectualization, so as to realize 3D roaming. It has the functions of single-person independent operation, multi-person independent operation, joint operation, disassembly, detection and maintenance of key facilities and equipment, integrable structure and large-scale computer virtual simulation software for network transmission. In the process of simulation training, it is necessary to simulate the specific environment, conditions and scenarios of a specific transaction in digital space from shallow to deep, from easy to difficult, from equipment operation to scheme planning, from process deduction to system management, so as to enable participants to acquire similar or even the same perception as in the real world, so as to achieve the same training as in the real world. Effect.

Through simulation training, it can not only improve students' learning enthusiasm, but also reduce the pressure of teachers' teaching and training. Under the same level of training, it can greatly shorten the training time, achieve the goal of enhancing the training effect and reducing the training cost.

In addition, in the construction of professional simulation training room, according to the characteristics of the specialty, students' knowledge level and skills interest should be fully taken into account, and combined with the characteristics and changes of talent demand in various professional fields, so as to achieve the integration of teachers, students and society. The construction of modern logistics simulation training center based on Internet of Things technology can comprehensively improve students' practical operation ability, improve the quality of classroom teaching, and effectively enhance the practical teaching ability of teachers in Higher Vocational
colleges. One is to consolidate theoretical knowledge and improve students' practical operation ability. After learning theoretical knowledge, students can deepen their understanding of theory and improve their practical operation ability by simulating practical operation. The second is to improve the quality of practical teaching and cultivate students' working ability and competitiveness. Third, to test the teaching effect and improve teachers' practical teaching level. In the process of practical training, both teachers and students are good at teaching. Finding the weak links in teaching is helpful for teachers to grasp the correct direction of teaching and further improve the teaching level in the process of combining theory with practice.

4.3 Programme
Building a modern logistics simulation training center based on Internet of Things technology is to implement the spirit of the national vocational education conference, conform to the teaching concept of Vocational education, closely follow the development of logistics industry, deepen the integration of schools and enterprises, and form a "sunrise" specialty with high social recognition. Based on the job requirements and professional standards, taking the professional logistics skills competition as the grasp, aiming at cultivating students' comprehensive professional ability, and cooperating with the construction task of Zhejiang Province's "13th Five-Year Plan" characteristic specialty, the corresponding goals are achieved. After the completion of the modern logistics simulation training center, it can accommodate 300 - 400 students to carry out training and teaching. Through the simulation teaching environment and virtual teaching system, it can complete the practical teaching tasks of logistics operation links.

See the table below for details:

Table 1: List of the Construction of Teaching and Training Conditions for Logistics Direction of Business Administration Major

<table>
<thead>
<tr>
<th>Serial number</th>
<th>Name of project</th>
<th>Training project</th>
<th>Corresponding courses</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Supply Chain Training Center</td>
<td>Material purchasing and supply management, Push/pull order management, VMI management, supply chain information instruction management, BOM management, Transportation management, customer relationship management, foreign trade documents, supplier evaluation index design, international freight forwarding,</td>
<td>Logistics and Supply Chain Management, Purchasing Inventory Management, Procurement Project Management, Procurement Negotiation Management</td>
</tr>
<tr>
<td>No.</td>
<td>Training Room</td>
<td>Description</td>
<td>Department.</td>
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<tr>
<td>2</td>
<td>Warehousing Management Training Room</td>
<td>Warehousing equipment cognitive practice, warehousing operation training project, loading and unloading handling training project, inventory operation training project, picking operation training project, warehousing operation training project, safety management project, etc.</td>
<td>Logistics and Supply Chain Management, Warehousing and Distribution Management, Purchasing Inventory Management</td>
</tr>
<tr>
<td>3</td>
<td>Transportation Dispatching Management Training Room</td>
<td>Acceptance of transport orders, selection of transport equipment, design of stowage plan, safety management of cargo loading and unloading, transportation cost accounting, handling of chemical transport accidents, etc.</td>
<td>Logistics and Supply Chain Management, Production and Operation Management, Warehousing and Distribution Management, Management Operations Research</td>
</tr>
<tr>
<td>4</td>
<td>Internet of Things Technology Training Room</td>
<td>1. RFID function design and process design of enterprise supply chain and production chain; 2. The application of RFID barcode, data acquisition, and the application of RFID storage system in logistics information system; 3. Three-dimensional simulation design improves the RFID control system; 4. Enterprises (especially chemical logistics enterprises) based on Internet of Things RFID technology process design.</td>
<td>Internet of Things Technology and Applications, Warehousing and Distribution Management, Management Operations Research</td>
</tr>
<tr>
<td>5</td>
<td>Logistics Culture Museum</td>
<td>The design of logistics history, logistics infrastructure, logistics mode, logistics standardization and other training projects requires students to master the development history of logistics, the basic theoretical knowledge of logistics and the functions of logistics facilities and equipment. Students can use the Logistics Culture Museum to study, research, project formulation, comprehensive analysis and solve logistics problems.</td>
<td>Logistics Management Basis, Logistics and Supply Chain Management, Warehousing and Distribution Management, Production and Operation Management, Internet of Things</td>
</tr>
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</table>
The supply chain training center takes the production, storage, supply and marketing of manufacturing enterprises as a supply chain environment as the background, and takes the planning, organization, coordination, supervision and control of material receiving and receiving activities as the experimental content to construct a logistics training center based on the Internet of Things technology. The center uses radio frequency identification technology such as RFID, GPS, GIS, barcode technology and radio frequency identification technology to sense, measure, capture and transmit logistics information anytime and anywhere through chips distributed in the procurement, transportation, warehousing, distribution and other links in the supply chain process; secondly, through network tools, it will collect and store information and numbers. According to the connection, interaction, analysis and multi-party sharing are carried out, so that multi-party collaboration can be achieved to achieve efficient operation of logistics in the whole supply chain.

The training center allows each trainee to consciously use the various software and hardware resources of the training system to complete the tasks assigned by the simulation business and solve various complex problems in the logistics management practice through various training methods such as environment simulation, task guidance, action participation, personal experience, scene feeling and so on. Organizational and managerial abilities, so as to achieve a simulation sense of "school-enterprise", "production-teaching", "engineering-learning" combination of practical training teaching mode.

Supply chain training room simulates the operation status of enterprises through intuitive business sand table. Let students experience the whole process of enterprise
operation in a series of activities such as market analysis, strategy formulation, production organization, overall marketing and financial settlement. The training projects undertaken by the center include material procurement and supply management, push/pull order management, VMI management, supply chain information instruction management, BOM management, transportation management, customer relationship management, foreign trade documents, supplier evaluation index design, international freight forwarding, chemical supply chain management scheme, beer game, etc.

4.5 Warehousing Training Room
According to the training plan of logistics professionals, according to the standards of logistics professional posts, taking the work process as the guidance, simulating the employment environment, establishing the simulation process of commodity transportation, distribution, warehousing operation, etc., reflecting the production of enterprises, and building an open modern logistics production-oriented training base according to the posts of logistics industry. The warehousing training room is integrated with the procurement, transportation, warehousing of materials in manufacturing enterprises and the sales logistics of finished products. Combining computer technology, information acquisition technology, automatic control technology, GPS and other advanced logistics and warehousing technology, wireless radio frequency technology, the warehousing management training room completes a series of practical operations of warehousing and distribution operation, such as warehousing, tally bar code generation, shelf storage, sorting, circulation processing, warehousing and distribution. Let the students complete a series of logistics operations in the training venue, so as to get all-round training to meet the needs of simulation teaching. For transportation (logistics) enterprises and manufacturing enterprises, train high-level technical personnel with practical operation ability and daily operation of warehousing management personnel such as warehousing, transferring, repackaging, packaging, circulation processing, warehousing, distribution and so on. The training room is built for warehousing
management according to the daily operation of goods receiving, warehousing, transferring, repacking, packing, circulation processing, warehousing and distribution in warehousing operation. Its goal is to build a set of simulation working facilities and software operation system for the actual workflow of warehousing enterprises, which can provide about 50 logistics professionals with warehousing management training at the same time. Activities can also provide social services to provide on-the-job training for logistics enterprises.

The training items include seven major items, such as warehousing equipment cognitive practice, warehousing operation training project, loading and unloading handling training project, inventory operation training project, sorting operation training project, warehousing operation training project and safety management project.

4.6 Transportation Dispatch Management Training Room

According to the working links and business processes of transportation operation, the simulation training room is constructed, the training software for transportation dispatching and the training facilities and equipment for transportation operation are purchased, which can meet the needs of 50 people for simultaneous training. To train the students in logistics direction of enterprise management specialty, and to train the transportation planning and dispatching skills to the society. Transportation dispatching management training room, through simulation dispatching monitoring, allows students to master the relevant knowledge of transportation dispatching, with transportation dispatching software, etc.

The training projects include accepting transport orders, selecting transport equipment, loading scheme design, safety management of cargo loading and unloading,
transportation cost accounting, accident handling of chemical transportation, etc.

4.7 Internet of Things Technology Training Room
Building a management system of training center based on campus network, carrying out project-based teaching and training of Internet of Things RFID technology and logistics information technology. It embodies the teaching methods of visualization, feasibility and learning by doing, and realizes the study and mastery of the analysis and application of RFID technology in the Internet of Things.

Establishing Logistics Intelligent Information platform, combining with radio frequency technology under logistics information system, introducing basic facilities such as product chip radio frequency reception, virtual product transportation and warehousing management system, applying Internet of Things technology-Radio frequency identification (RFID), sensor network and detection, intelligent technology to chemical transportation, warehousing and distribution management, improving comprehensive safety control in student Logistics Institutional and preventive capabilities.

At the same time, the in-school training room can serve both in-hospital teaching and social training, and promote the wide application of RFID chips in the industrial chain. The training project includes four major projects: 1) the function design and process design of enterprise supply chain and production chain; 2) the application of RFID barcode, data acquisition, and the application of RFID in logistics information system; 3) the improvement of RFID control system by three-dimensional simulation design; 4) the process design scheme of enterprise based on Internet of Things (IOT) RFID technology. Internet of Things technology training room is mainly equipped with Internet of Things training platform and logistics supply chain training platform, through the Internet of Things training platform for training operations, so that students can use the relevant technology and knowledge of the Internet of Things.

The laboratory can carry out basic experiments for higher vocational students majoring in logistics management and e-commerce. The laboratory can carry out innovative
design experiments for undergraduates majoring in logistics management and electronic commerce. The laboratory can be used as a set-up laboratory of Shandong Elite College to release the students. Students can carry out basic performance, application performance validation and innovation experiments in the laboratory. The laboratory can be used as a platform for teachers to engage in scientific research activities, as well as a cooperation platform for scientific research and technology exchange in logistics application in Shandong Province. The lab can set up operation scenarios under different logistics application scenarios, and equipped with label books and label libraries to provide label selection consultation and design for enterprises. The laboratory can be used as a public service platform for the application of Internet of Things technology (logistics) in Shandong Province, and as a platform for enterprises and governments to apply, promote, display and test.

4.8 Wenshang Logistics Culture Museum
The construction of Wenshang Logistics Culture Museum is an important symbol of the progress of logistics culture. Logistics Culture Museum can carry out collection protection, exhibition, academic exchanges, scientific research and personnel training functions. In addition to popular science publicity, it is also a place for students majoring in enterprise management logistics to exhibit teaching research and practice. The requirement of Wenshang Logistics Culture Museum is "high starting point, high level of design", with the goal of "serving area, serving students, creating brand" and striving to build a "leading domestic and provincial first-class" logistics museum.

Through the comprehensive research and demonstration of the development of logistics in China yesterday, today and tomorrow, we can build a platform for the exchange of logistics culture, and do a good job in the protection and research of logistics cultural relics, so as to inherit the logistics civilization of the Chinese nation. Wenshang Logistics Culture Museum takes "the development of Chinese logistics, especially Wenzhou logistics history and culture" as its main line. Based on "Museum". The museum displays pictures, text, physical simulation, multimedia and other means. The main functions of the design are: cultural relics collection function, educational
function and display function.

4.9 Future Supermarket

Warehousing and Inspection
When the labeled goods arrive at the distribution center, the reader at the entrance will read the label automatically. According to the information of the goods, such as the quantity of goods, unit price information, types of goods, etc., the management subsystem of the background will automatically update the inventory list. At the same time, according to the needs of the order, the corresponding goods will be shipped to the right place.

Arrangement and Supplementary Goods
Carriers equipped with mobile readers automatically arrange the goods, and automatically deliver the goods to the correct location according to the instructions of the management system. At the same time, the inventory list in the management system is updated to record the latest location of the goods. The management system will automatically issue a replenishment application when the inventory is insufficient for a specified quantity, thus replenishing the corresponding quantity of goods at an appropriate time. When sorting out the goods and replenishing the stock, the reader will alert the management system whenever it finds that the goods have been stacked in the wrong place. According to the instructions, the delivery vehicle will reload the goods to the designated correct position.

Cargo transportation out of warehouse
When the goods are out of warehouse at the distribution center and pass through the valid range of the reader at the warehouse exit, the reader automatically reads the information on the label of the goods. Without scanning, it can directly transport the exported goods to the branch stores. At the same time, it manages the sub-system.
and timely updates the inventory information of the goods in the distribution center. Inventory of distribution center. It is assumed that the location of each reader should be arranged reasonably in the warehouse of the distribution center, so that the labels of all the goods in the warehouse can be covered. In this way, the reader can be used to read the information of all the labels in the warehouse, and then the inventory information of the goods can be checked by summary calculation.

5. Conclusion
Taking higher vocational colleges as an example, this paper studies the construction of modern logistics simulation training center based on Internet of Things technology. There are two innovations as follows:

Theoretical innovation: In upgrading the functions, equipment and process of the training center, the Internet of Things technology and the idea of simulating intelligent logistics are applied.

Technological innovation: integrated application of information technology, intellectualization, Internet of Things technology and automation technology, integration of software and hardware, integration of scheme and operation, and integration of logistics from the perspective of supply chain.

This research has certain practical value: the deep integration of theory and practice, providing a practical base for training high-skilled talents with intelligent logistics technology, innovative entrepreneurship of teachers and students and reform of teaching mode for Higher Vocational colleges, making comprehensive use of existing equipment and facilities, combining new technology and equipment, realizing intelligent logistics, combining software with hardware, combining program with operation, from supply. Chain angle realizes integrated logistics. The new logistics simulation training center based on the Internet of Things will be student-centered for teaching innovation, broadening the scope of scientific research and social services, and can become a training base for logistics and supply chain competitions (in-school competitions, provincial competitions and even national competitions).

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