Reform and Practice of Training Mode of Logistics Talents in Higher Vocational Colleges Under the Background of "One Belt and One Road"

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Key words: One Belt and One Road, Higher Vocational Colleges, Logistics Talents, Training Reform

Abstract. The increasingly deepening of the "belt and road" initiative has brought about changes in the training of international skilled talents in higher vocational colleges, especially as a more important logistics talent facing better opportunities and higher requirements. This paper chooses logistics talents training in higher vocational colleges as the research object, combines with the actual needs of talents, discusses the reform of talent training mode of logistics specialty, puts forward a series of reform plans, and analyses the necessity and concrete measures of reform from four aspects. The research shows that only by adhering to the policy of docking logistics industry, integrating the training chain of logistics talents into the development chain of logistics industry, realizing the internationalization of talent training and systematization of social service, can the reform of talent training be successfully promoted, and the idea of "one belt and one road" construction be actually realized.

Introduction

With the in-depth implementation of the "one belt and one way" initiative, the logistics industry has been constantly pushed to a new height, especially in the field of international logistics, thus ushered in a new momentum of development [1-3]. The construction of the international logistics corridor connecting "one belt and one road" needs a powerful international logistics talent team. This is the key factor of promoting the smooth implementation of the "one belt and one road" international logistics corridor and the "belt and road" initiative [4].

The developed countries attach great importance to vocational education and their successful experiences are worth learning from [5-7]. As a higher vocational college undertaking to train practical talents, it is necessary to seize such opportunities and speed up the reform of logistics talents training [+1].

Background of Logistics Talent Training Reform and Innovation

The trend of "one belt and one road" construction has put forward many specific requirements for logistics professionals, as shown in Fig. 1.

With the opportunity of "one belt and one road" initiative, Chinese logistics enterprises and higher vocational education speed up the pace of progress and continuously integrate into the construction of the initiative [8]. Hunan Modern Logistics College, which is the only one vocational college of the nation focused on logistics, jointly constructed by the Hunan Provincial People's government and the China Federation of logistics and purchasing. The characteristic higher vocational colleges are deeply involved in the construction of the "one belt and one road" in the country, and serve the construction of "one belt and one road" with "talents" and "intelligence". With the help of relevant platforms of industry and enterprises, the logistics parks and related enterprises along the "one belt and one road" area and their demand for talents are also presented. A thorough and comprehensive survey was conducted.

At present, the most needed talents in logistics parks and logistics enterprises along the "one belt and one road" area are those who master the theories and skills of modern economy, trade, transportation and logistics [9].
These professionals need solid English skills in international trade, transportation and logistics management. Nowadays the obvious shortage of logistics talents is in warehousing, transportation, distribution, freight forwarding and other fields, and there is a obvious deficiency of international logistics talents with relevant system managers and professional operators familiar with import and export trade business, especially in the field of electronic commerce and commodity distribution, capital turnover and cost accounting. Logistics personnel with professional knowledge and operation methods are in short supply.

Excellent talents’ cultivation relies on excellent teachers. A perfect and strong team of teachers is indispensable [10]. From the actual demand of logistics talents, it is urgent and important to strengthen the construction of teachers and carry out the reform of precise training mode for logistics talents.

Starting from the actual needs of logistics talents, it is urgent and important to reform the precise training mode of logistics talents for logistics specialty.

**Measures for Reform and Innovation of Logistics Talents Training**

Talent training is a systematic project. It is vital to learn from successful experience of other universities and advanced counties, broaden our thinking and carry out innovative design [11,12]. Hunan Modern Logistics College has carried out reform and exploration in the training of logistics talents, promoted innovative practice, and achieved many successful experiences.

**Establishing Linkage Early Warning Mechanism Relying on Industry**

Being inspired by the revelation of the quarterly report on the demand for logistics talents issued by China Logistics and Purchasing Federation, relying on the support of logistics industry associations, promoting the transformation and upgrading of logistics industry, establishing professional early warning mechanism and carrying out professional dynamic adjustment, are the tasks and opportunities of universities [13].

To put this work into practice, first, it is necessary to use the platform of China Logistics and Purchasing Federation to investigate the employment and work situation of graduates, and assist
China Logistics and Purchasing Federation to publish quarterly demand analysis report of logistics talents, and regard the report results as the dynamic adjustment and setting of specialties and the distribution of enrollment as the important basis. Secondly, schools should combine the quarterly logistics talent demand report of China Logistics and Purchasing Federation with the data of talent training quality and employment quality report issued by third-party organizations to construct the professional early warning mechanism of red, yellow and green levels, and dynamically adjust the professional enrollment according to the early warning level. Red warning is put forward for the electronic information technology specialty which is not needed in the industry and market, and enrollment is stopped and exit procedure is entered in that year; yellow warning is carried out for the specialty whose market demand is not strong, and enrollment plan is reduced; at the same time, targeted specialty construction should be carried out according to the need of transformation and upgrading of logistics industry [14, 15].

Docking Industry, Dynamically Adjusting the Professional Structure

The important work currently is: docking the transformation and upgrading of logistics industry, timely and dynamically adjusting the professional structure, building modern logistics management group, intelligent logistics technology group, emerging logistics business group, and international logistics service group, so as to build a modern integrated four-coordinated logistics professional group.

Firstly, it has to be done to conform to the transformation and upgrading of logistics industry, and establish a market-oriented, effective constraints, open, and dynamic professional construction mechanism.

Secondly, in the supply-side reform of higher vocational education, a market-oriented, structural optimization and quality-oriented professional adjustment mechanism should be established. Implementing the coordinated interaction between "demand side" and "supply side", realizing the benign development of market demand and talent supply, deepening the reform of professional supply side, closely combining professional construction with regional economic development, achieving the service purpose of talent cultivation, taking employment as orientation, keeping up with the change of market demand, and doing well in increment and inventory in the professional construction, are the targets of our education.

Thirdly, professionals should be encouraged to upgrade the logistics industry and serve regional economic construction from the source.

The college has formed an all-round modern logistics professional system to connect the logistics industry, and has constructed a modern logistics management professional group with "demonstration-led, excellent development", "technology-led, efficient and agile" intelligent logistics technology professional group, "innovative development, entrepreneurship as the first" emerging logistics business professional group, and the International Logistics Service Professional Group with Collaborative Innovation and Accurate Service. Each professional group takes provincial characteristic specialty as the core to carry out construction.

Optimizing the Curriculum System Timely

According to the new requirements of post technology, to optimize the curriculum system in time and strengthen the construction of the general curriculum system of "three horizontal, three vertical and five links" are necessary to be done.

At first, considering the characteristics of school running specialty of docking logistics industry, the college have established the idea of training modern logistics talents with modern logistics concept, and combined the needs of logistics industry development and regional economic construction, and determined two basic courses of general specialty, E-Commerce, Introduction to Logistics Culture; three core courses of logistics specialty, which are: Transportation Management Practice and Warehouse, Storage Management Practice and Project Management of Third Party Logistics Enterprises, and then formed a modular curriculum system.
The second job is to innovatively construct the curriculum structure of "platform + module", form the advantages of professional clusters, constantly integrate teaching resources, ensure the stability of professional construction, effectively avoid duplication of construction, reduce the cost of curriculum construction, generate the characteristics and advantages of professional construction, highlight the scale effect, and effectively promote the development of professional connotation construction [+2]. With the continuous improvement of teaching level of professional groups, students' professional ability of serving the economy and society have been greatly improved [+3].

**Implementing Apprenticeship System and Improving Post Practice Ability**

It is available to vigorously promote the reform and practice of post practice based on the modern apprenticeship system [16]. For the purpose of improving the competitiveness of students in employment, we should carry out post practice on the basis of modern apprenticeship, and change courses and on-site through alternate learning and practice in the stage of post practice. Under the guidance of "Double Teachers", students complete professional study, pre-job training and post training, on-the-job internship and graduation design while training. After the end of the internship period, the enterprise gives the results of the internship according to the students' performance and professional ability. Through a mutual selection, students may become full-time employees of the internship enterprise. Modern apprenticeship practice mode strengthens the communication between schools and industries, makes the training of talents closely linked with the demand for talents, and lays a solid foundation for students' employment and career choice.

It is necessary to formulate various kinds of practice rules and regulations, so that every link and every aspect of post practice is able to be constrained, while the practice management is constantly developing towards standardization and institutionalization.

At the same time, innovative management is also very significant. Management could be strengthened by various methods, such as fixed-point management (tracking apprentices of fixed-point enterprises through counselor guidance), resident-point management (internship management from professional teachers to internship enterprises), remote management (professional teachers use modern communication tools such as QQ and WeChat to make a remote monitoring), as well the patrol management (managers regularly check apprenticeship training) and so on.

**Effect of Logistics Talents Training Reform and Innovation**

Under the guidance of the school-running idea of "docking and boosting industry, deeply integrating the logistics talent training chain into the logistics industry development chain", the school relies on the Modern Logistics Vocational Education Group to dock the logistics industry in an all-round way, realizing the clustering of specialty construction, internationalization of talent training, systematization of social service, and make the effect of talent training reform significant.

**Clustering of Specialty Construction**

Following the new trend, new technology, new equipment and new management mode of logistics industry development, it is in line with the pace of regional economic development. From the perspective of meeting the needs of logistics industry chain, it connects all fields of logistics industry in various ways, responds to the talent demand of modern logistics industry, and develops professional clusters with characteristic specialties as the core. Through the sharing of professional resources, it is possible to effectively solve the problem of unbalanced development, promote the coordinated development of different professions within the industry group, open the dynamic adjustment of specialty, and gradually improve the scale and resources of modern logistics management specialty group, emerging logistics business specialty group, intelligent logistics technology specialty group and international logistics service specialty group. Through a period of construction and efforts, the modern logistics management professional group has been established as a provincial demonstration characteristic professional group. In addition, the modern logistics management professional group, intelligent logistics technology professional group, emerging
logistics business professional group, etc. have also passed the audit in the first selection, and a first-class provincial characteristic professional group is set up.

**Internationalization of Talent Training**

With the in-depth implementation of the "one belt and one way" strategy, the pace of "going out" of service enterprises is accelerating. The demand for skilled skilled logistics talents with international vision and international rules is increasing. Achievements in internationalization of talent cultivation include three aspects.

The college have cooperated with the University of Applied Technology in North Hessen, Germany (up to now, students of seven grades have been enrolled and all the first students have gone abroad); it has carried out the cross-border recruitment and mutual employment of teachers; implemented the reform of the personnel training mode of the "two-tiered" system; and introduced the modular curriculum system and high-quality educational resources of Germany. It has realized the exchange of courses and the mutual recognition of credits, opened up the channel of international promotion for Higher Vocational students, and accumulated the experience of international cooperation in running schools.

Focusing on the improvement of teachers' level of internationalization, a group of teachers have been trained with the international perspective through the interactive way of "walking out, and coming in". Teachers are organized to study in batches in more than 10 countries and regions, such as the United States, Germany and the United Kingdom, by means of communication, training and visiting. Over 180 people have gone abroad to study. Among them, more than 50 trainings have been conducted in developed countries such as the United States, Germany, the United Kingdom and Australia. Through Sino-German cooperation in running schools, four teachers from Germany who are with German background or working experience in German enterprises have been hired all the year round. Teachers from German colleges and universities have been invited to teach more than 10 times and three returnees and PhD students have been introduced. So far, the internationalization rate of the faculty has reached 42%.

International exchanges have been strengthened in many ways. As of June 2019, 12 communication and cooperation projects have been signed, including three international projects that have been put into practice: the "Logistics Management Professional Cooperation Project" with North Hessen University of Applied Technology in Germany, the teacher training and scientific research project with Derby University in Britain, and the cooperation and exchange training with Logistics College in Singapore. Five international cooperation projects have been signed and are being approached, which are expected to enter the stage of implementation in the near future: the "3+1+1" apprenticeship program with Derby University in the UK, and the overseas internship and study tours for students with ACE College in Singapore and North Hessen University of Applied Technology. Three international cooperation projects have been signed and are in progress, which are cooperation projects with Singapore, Korea and Thailand.

**Systematization of Social Services**

The construction of the cooperation mechanism between industry, university and research institutes has been built in the round. Some scientific research institutions as the Internet of Things Engineering Research Center, the Logistics Information Technology Research Center, the Institute of Higher Vocational Education, the Institute of Higher Vocational Education and Adult Education of Hunan, and the Institute of Higher Vocational Logistics Teaching and Research, which has formed a relatively perfect market-oriented and important research institution Project-driven new industry-university-research cooperation system have been successively established. Taking Hunan Logistics Public Information Platform as the starting point, three high-quality logistics information technology research and development teams, logistics management consulting teams and logistics vocational training teams have been structured jointly with the front-line expert group of Hunan Modern Logistics Vocational Education Group.

Logistics information technology R&D team has undertaken more than 100 provincial and national research projects and enterprise projects, 12 key and major projects of Hunan Development
and Reform Commission, Hunan Science and Technology Department and Hunan Commerce Department, and 78 research items cooperated with enterprises. Besides, 43 provincial projects have been declared.

Logistics management consulting team has provided project consulting, process optimization, technology research and development, planning and other services for nearly 100 logistics parks and logistics enterprises, such as Jiangsu Gifted Integrated Logistics Park, Hunan Jinxia Logistics Park, Loudi New Cooperative Logistics Co., Ltd. Multimodal Transport Center, Huaihua Agricultural Products Logistics Center, etc. With the "Thirteenth Five-Year Plan for the Development of Hunan Logistics Industry", "Hunan Logistics Key Project Bank", "Establishment of Hunan Logistics Statistics System", "Hunan Emergency Logistics Standards" and other projects of discussion, scheduling and construction, undertook the formulation and evaluation of national A-level logistics enterprise evaluation standards. The project evaluation of "2A Logistics Enterprise" in Southern Province serves the logistics industry and associations in formulating enterprise evaluation and construction standards, and provides relevant services for the government in formulating relevant industrial development and vocational education reform policies.

The logistics professional training team has organized and held the training courses for logistics backbone of Baisha Transportation Co., Ltd., logistics management cadres of Xiang Tong, advanced training courses for logistics informatization construction of Hunan Province, forklift training courses for Jin Xia Grain Logistics Park of Hunan Province, and modern logistics specialty of Luliang Xiaolong Coal Comprehensive Logistics Park of Shanxi Coal Marketing Group. In cooperation with the Information Industry Department of Hunan Province, two sessions of "Two Modernizations" were held, including topic training, Henan Zhongyuan Railway Logistics Co., Ltd. Modern Logistics Management Training Course, State-level Vocational College Logistics Management Professional Backbone Teachers Enterprise Post-setting Training Course, Hunan Vocational College 3D Printing Technology and Internet of Things Professional Teachers Provincial Level Training Course. Fusion senior cadre training course, for logistics enterprises, has held nearly 50 training courses for logisticians, purchasers and other types of training courses, the number of trainers reached more than 25,000 people, thus effectively promoting the overall improvement of the professional quality, post skills and comprehensive quality of the whole group, effectively enhancing the overall strength of logistics enterprises. At present, the Group has become the staff training base of more than 20 enterprises all over the country, such as China Merchants Bureau Logistics, China Sea Logistics, Shanghai Anji, Guangzhou Automobile Fiat, Guangzhou Automobile Shunjie, etc.

The college has become a national demonstration base for logistics industry-university-research cooperation, "Logistics Teachers Training Center", "Hunan Logistics Teachers Training Base", "Hunan Logistics Professional Qualification Certification Base", "Logistics Vocational Education Research Center", and "Hunan Logistics High-skilled Talents Training Base", serving Hunan and even the whole country's logistics industry. The development of the industry has provided strong technical skills talents support and technical skills innovation services.

Conclusion

Under the background of the smooth implementation of the strategy of "one belt and one road", higher vocational education needs to adapt to the development needs of internationalized talents, and constantly push forward the reform of personnel training mode, so as to provide solid support for the construction of "one belt and one road". The college fully recognizes the importance of Logistics Vocational Education to the construction of "one belt and one road", vigorously promotes the reform of logistics personnel training, develops precise personnel training, and constructs the international logistics service professional group around the "one belt and one road" construction, implements professional dynamic adjustment, and sets up a Sino Foreign Cooperation Office for logistics management. The major is to innovate the curriculum system of internationalized talents, and enhance the ability and level of building services along the way.

The internationalization of the college has accelerated, the level of teachers has been greatly
improved, the vision of students has been expanded, and the international cooperation of scientific research has been deepened. New progress has been made in the internationalization of teachers' social services. Through the Ministry of Commerce's foreign aid training project, a number of special training courses have been conducted for the "belt and road" countries along the line, including senior managers, government officials, business and foreign trade practitioners, and 95% of the teachers are owned by the college. The number of students working along the "one belt and one road" has been increasingly raised, and the practice and skill level of the "one belt and one road" construction has been improved rapidly. The college is going to carry out research further, speed up reform, consolidate achievements, and focus on building a professional group of international logistics services, so as to provide qualified personnel services and intellectual support for the construction of "one belt and one road".

Acknowledgement

This research was financially supported by the Research achievements of Educational Science Planning in Hunan Province (No. XJK016QZY008).

References


