

Research on the Construction of Vocational College Modular Curriculum System of Logistics Management Major Based on Sino-German Cooperation*

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Abstract—The construction of the Sino-German cooperative education curriculum system is very important for improving the quality of teaching and the quality of personnel training in vocational college. It is a scientific and systematic construction of a Sino-German cooperative education curriculum system in vocational college, which is effectively implemented through diversified methods, aiming at cultivating high-end technical and skilled talents with an international perspective. Combining with the main principles and basic approaches of their curriculum system construction, they put forward that the establishment of the training objectives of logistics management talents in higher vocational schools should be oriented to the needs of post (group), and the establishment of the curriculum system should be based on the ability requirements; On the basis of analyzing the knowledge structure and ability requirements of talents, the basic framework of the professional curriculum system is put forward to realize the healthy and orderly development of Sino-German cooperation in running schools and the established talent training goals.

Keywords—*modular; logistics management; Sino-German cooperation in running schools; curriculum system*

I. INTRODUCTION

In recent years, with the extensive promotion of artisan spirit in the field of higher vocational education and the increasing demand for international logistics talents, Sino-German cooperation in running schools has sprung up, especially in logistics management, and the cooperation in running schools aims to reflect the effect and the characteristics of cooperation in running schools. Using the introduction or integration, they directly introduce the foreign curriculum system and carry out training and teaching. In practice, we can find out that the curriculum module is imperfect, the scope of the curriculum description is different, the training objectives are quite different, and the language curriculum is not up to the requirements for regulations, etc. These are completely unable to meet the

training needs of existing cooperative projects.

Quality is the lifeline of Sino-German cooperation in running schools. However, the quality of personnel training in most projects is being attacked by the unreasonable curriculum system. Combined with the changes in international industry transfer and economic environment, the curriculum system of Sino-German cooperation in logistics management is urgently needed to be reconstructed. It is particularly important to improve the quality of Sino-German cooperation in running schools from the perspective of the construction of the curriculum system. Therefore, how to construct a system with a reasonable system is an urgent need to solve the Sino-German cooperation in logistics management programs in various higher vocational colleges. The issue focuses on exploring the establishment of a new curriculum system based on the “modularity” of domestic characteristics to improve the quality of personnel training in Sino-German cooperative education projects in logistics management.

II. COURSE STATUS

A. Sino-German Cooperation in Running Schools

The statistical time is as of January 2018, and there are 2058 Sino-foreign cooperative education projects in the country. Among them, there are 77 cooperative schools with Germany, 54 are at undergraduate level, 23 are at the specialist level, 16 are in higher vocational colleges, and 22 projects based on logistics management professional cooperation. In Hunan Province there is only one logistics management major in cooperation with Germany.

B. Current Status of Curriculum System Construction

The characteristics of the curriculum system construction mainly reflect the graduality and introduction of the curriculum first, which is conducive to the digestion and absorption of students' to learn knowledge. Secondly, it pays attention to the variety of curriculum settings, which is conducive to the comprehensive study of students. Thirdly, it fully embodies the knowledge of the course for practice.

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The shortcomings are mainly reflected in the lack of its own characteristics in the curriculum construction first. The overall level of introduced curriculum resources is not high. It is affected by factors such as funds, teachers and management. The progress of joint development courses is slow, and some courses are single-set, or elective courses are few-offered, etc., the quality guarantee for Sino-German cooperation in running schools has lost the most basic support; Second, the curriculum objectives are not clear enough, lack of training for students' lifelong learning ability and good study habits; Third, the course implementation process is unreasonable. The lack of consideration of the characteristics and foundation of Chinese students' learning makes many students difficult to adapt to the courses and make them grow certain learning pressure; Fourth, the number of project hours is not properly arranged, and a large number of repeated German courses are provided. The students' tasks are too heavy, so that students' time spending on professional study is relatively reduced, and it is difficult to form professional knowledge and skills. Fifth, the curriculum evaluation system is imperfect. The evaluation criteria of the course are different. The subject of the course evaluation is too single, and it is difficult to form a correct evaluation result. Sixth, the screening ability of the course is relatively low. The curriculum of the two sides has not been fully integrated. There is the situation that two lines and two systems are simply added together. It is difficult to break through the teaching methods and teaching modes, and the teaching plans are not well connected.

III. CONSTRUCTION PRINCIPLE

A. German Characteristic Principle

The construction should consider the characteristics of the original German curriculum system. It means that the advanced part of the original German curriculum system should be considered when constructing the curriculum system, such as the domestically recognized "dual system" training mode and "modular" curriculum system, the continuity of the Huge teaching model in the curriculum system, as well as the evaluation model, the use of assessment methods in advanced courses, and the embodiment of German craftsmanship in the curriculum system.

B. Credit Recognition Principle

In order to ensure the smooth implementation of the (3+2) book-through mode in the Sino-German cooperative education project, considering the maximization of the course credits, and allowing students to study the least credits abroad. It is necessary to confirm the issues from both sides including the involved connection and curriculum of the teaching plan. Both China and Germany should follow the common discussion, jointly formulate the teaching plan and the principle of maximum recognition of credits, and learn from the curriculum and modules of relevant foreign majors (because of the German curriculum assessment and module identification), and continuously optimize the professional curriculum system.

C. International Development Principles

The curriculum should maximize the introduction of professional courses and international cultural courses, and add international safety management courses in line with the international situation, expand students' knowledge, promote the internationalization of local courses, specialization of German teachers, and Germanization of professional teachers, thus truly achieving international education and talent training goals.

D. Characteristic Innovation Principle

Combine the modular curriculum characteristics and local characteristics to carry out curriculum innovation, timely adjust the scope and syllabus, and ensure the modular curriculum system is fully implemented according to the actual innovation module and curriculum setting. Ensure the comprehensive implementation of modular curriculum system to meet the course setting requirements of Sino-German cooperation project.

E. Principle of International Integration

Insist on teaching in small class and introduce in the international teaching resources, assessment mode, teaching mode and evaluation mode. First, the bilingual and double-teacher classes are carried out in a timely manner, and the implementation process is gradually transitioned. In the previous courses, the dual-teacher teaching is adopted. In the second-grade and above classes, bilingual teaching can be carried out, and the simplified translation review of German teachers can help students improve their learning efficiency. Second is to integrate with the assessment and evaluation mode of Germany. In order to ensure the students can get the highest university score, a combination of course assessment and module assessment is adopted to ensure the implementation of the project.

IV. CONSTRUCTION IDEAS

Through the analysis of the introduction method and talent training needs of the current high-level Sino-German cooperative education project system in China, combined with the existing high-level logistics management professional Sino-German cooperation school curriculum system setting and implementation status, the concentration should be put on the legal curriculum difference setting. The student occupation internship should be implemented in stages and the elements of the step-by-step "dual system" reform of the personnel training model can be learned from the German model. On this basis, it is necessary to clear the various aspects in comprehensive consideration of the curriculum system setting process from the perspective of Sino-German cooperation in running schools, scientifically and accurately grasp the principles and framework of curriculum setting, and construct a realistic Sino-German cooperative education curriculum system for logistics management majors, and apply it to the talent cultivation process of higher vocational logistics management profession. Through practical experience, summarize and analyze a set of effective implementation methods.

V. CONSTRUCTION FRAME

According to the documents of the Ministry of Education, the Sino-German Cooperative Education Program must meet three third-requirements when conducting cooperative education. One of them is that the imported foreign curriculum and professional core curriculum resources should account for three points of the entire curriculum of the cooperation project or more. Combine with the upgrading project reality of logistics management major in Hunan Modern Logistics College running by Sino-German cooperation (3+2). According to the talent training objectives

of higher vocational Sino-German cooperation in running schools, the characteristics of higher vocational education and the actual learning ability of students, the curriculum system of the learning phase in China and at abroad has been systematically constructed from the aspects of segmentation dual element, modular curriculum system and transnational capitalization, taking the students' language level, knowledge and skills, comprehensive ability and humanistic literacy into consideration. The basic framework of the re-constructed modular curriculum system is shown in the following "Table I".

TABLE I. SINO-GERMAN COOPERATIVE SCHOOL MODULAR CURRICULUM SYSTEM TABLE FOR LOGISTICS MANAGEMENT IN HIGHER VOCATIONAL COLLEGE

Serial number	Module	test type	Name of German courses	credit	Name of Chinese Courses	credit
1	Public learning	Examination/test			Ideological and moral cultivation and legal basis	3
					Sports & Health	2
					Introduction to Mao Zedong Thought	4
					Formal policy	1
					Sports club activities	2
					Mental health guidance	1
					safety knowledge	1
					Employment and entrepreneurship guidance	1
2	Foundation of business management	closed book test	Foundation of business management	12	Foundation of business management	6
			Legal basis the basis of commercial law and trade law ^①		Legal basis	2
3	Logistics management	closed book test	Purchasing/logistics	8	Introduction to Modern Logistics	2
					Purchasing management practice	4
					Warehousing and distribution practices	4
					Commodity maintenance	2
4	Personal organization management	closed book test	Introduction to Civil Law and Debt Law ^①	8		
			Personal organization management			
5	finance	homework	Labor Law ^①	12		
			finance		Logistics finance practice	4
			investment ^①			
6	Enterprise organization management and marketing	closed book test	Property Law ^①	10		
			Organization management		Third-party logistics enterprise management	4
			marketing		marketing	4
7	Communication 1	Special Report	Bankruptcy Law ^①	6		
			Rhetoric ^③		Rhetoric ^③	2
8	Communication 2	closed book test	Cooperation conflict resolution ^③	8	Cooperation conflict resolution ^③	4
			Business English 1		German 1, 2, 3, 4, 5	20
9	Communication 3	oral test	Business English 2	6	German hearing 1, 2, 3	6
			Business English 3		German speaking 1, 2, 3	6
10	Accounting 1	closed book test	Intercultural Communication ^③	14	Intercultural Communication ^③	2
			Bookkeeping 1		Basis of Accounting	2
			Bookkeeping 2		Basis of Accounting	4
			Business accounting		Business accounting	2
11	Accountancy 2	closed book test	Balance sheet ^②	8	Balance sheet ^②	6
			Cost calculation 1		cost accounting	4
12	Cybernetics	closed book test	Cost calculation 2	6	Logistics cost management	4
			Cybernetics ^③			
13	National Economics 1	closed book test	National economic foundation	8	National economic foundation	4
			Microeconomic foundation ^②		Microeconomic foundation ^②	4
14	National Economics 2	closed book test	Macroeconomic basis ^③	4	Macroeconomic basis ^③	4

Serial number	Module	test type	Name of German courses	credit	Name of Chinese Courses	credit
15	Methodological basis	closed book test	Economic Mathematics	6	Economic Mathematics	4
			Scientific working method①			
16	Information processing	closed book test	Information processing 1②	4	Computer Basics②	2
			Information processing 2②		Information processing 2②	2
17	statistics	closed book test	Statistics 1	8	Statistical basis	4
			Statistics 2		Linear Algebra and Probability Statistics	4
18	Marketing research	Project work	Social research practice	4	Social investigation and practice	2
			Project management①			
19	International logistics Management direction	closed book test	Strategic Decision①	10		
			International Transport①			
			Finance and risk management①			
20	Professional internship	Internship report + reply	Professional internship	24	Enterprise post internship / graduation design	24
21	Graduation thesis	Graduation thesis defense	Graduation thesis①	14		
		①	Suggested courses for students to study in Germany			
		②	Courses that are offered in China but require German textbooks and resources			
		③	It is recommended that German teachers send teachers to complete courses in China.			

VI. IMPLEMENTATION GUARANTEE

A. Building Internal and External Training Conditions

Taking actual production and processing products as practical projects, increase the number of practical courses, strengthen the training, and promote the professional quality and vocational skills of students. Focus on the teaching of theoretical and practical integration courses and productive training courses, actively build on-campus production internship training bases to meet the teaching needs, extensively carry out school-enterprise cooperation outside the school, and deeply implement off-campus training to ensure the effective implementation of the curriculum system.

B. Creating a Teaching Team Combining Chinese and German

Build a specific Chinese-German curriculum teaching team and a professional curriculum combining Chinese and German. On the one hand, we will continue to improve our professional and technical skills by means of teachers and German-funded enterprises. On the other hand, we will increase the introduction of foreign teachers and foreign teachers. The course will allow students to truly accept the German professional curriculum education, introduce the advanced teaching methods and curriculum system of Germany into the professional teaching, and continuously optimize the existing curriculum system.

C. Ensuring the Quality of the Implementation of the Curriculum System

It can synchronize the teaching management of Sino-German cooperative colleges, simulate the same teaching scene and living environment, and adopt international teaching methods, actively introduce German original textbooks, and build an international online teaching platform to realize the interaction between teachers and

students. And improve students' learning ability, implement small class teaching, pay attention to the development of students' personality, and break the cultural conflicts in the curriculum of Sino-German cooperation in running schools.

D. Increasing Resources for Curriculum Implementation

Compared with the original Chinese curriculum, the new curriculum system of the cooperative project has undergone major changes. The relevant departments of the teaching department need to cooperate with each other, change the class organization, strengthen the training of teachers to go out, and increase the support for people, finances and materials to ensure the effective implementation of the curriculum system.

VII. CONCLUSION

In summary, through the in-depth analysis of the existing curriculum system of Sino-German cooperative education projects, combined with the professional ability training and comprehensive quality improvement of logistics management students, the original curriculum system of the Sino-German cooperative education project was reformed and reconstructed. We build a set of Sino-German cooperative education curriculum system that meets practical needs, scientific, reasonable and practical. In the introduction of the German "dual system" talent training model, "modular" curriculum education system and high-quality teaching resources, advanced educational concepts, innovative teaching methods etc. to find new ways for the logistics management majors of higher vocational colleges to provide reference for professional construction, talent training mode or teaching reform, and the basis for the curriculum system setting for the application of undergraduate and other colleges and universities in the development of Sino-German cooperation. We should effectively improve the international logistics management profession, establish a level of education, and cultivate

professional talents with an international vision, innovative consciousness and innovative ability so that we can play a positive role in promoting the development of the local economy.

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