Research on the Construction of Core Courses in Higher Vocational Education

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Abstract. This paper introduces the development of vocational education at home and abroad. It focuses on its employment-oriented goal, the skills including service career, job knowledge, and ability and quality requirements. This paper puts forward the idea of strengthening the core professional skills of the major in IT industry through the cooperation of industry and university, exploring the implementation methods, the implementation conditions, the implementation environment and the implementation effect test of the "core technology" program of IT industry. And on this basis, through practice of professional construction, this paper discusses how to establish a complete set of "core technology" solution for IT professional construction in order to promote IT professional curriculum development, curriculum structure and curriculum system construction, teaching methods and methods of reform, training base construction, teaching material construction and teaching staff construction, etc.

1. Introduction

Higher vocational education has the dual attributes of higher education and vocational education. With the increasing of the number of professional colleges and enrollment, the scale of Higher Vocational Education in our country is expanding. Objective to improve the professional quality of the various colleges and universities of the Career Academy caused great competitive pressure. Because of the rapid development of Higher Vocational Education in our country, the number of higher vocational colleges is expanding. However, many schools lack the basic conditions for running schools, and all the higher vocational education should be changed from scale expansion to connotation construction. According to statistics, the current higher vocational education enrollment professional record involving 19 major categories, 80 professional class two, the 750 professional, the professional point of 36297, covering the country's first, all areas of the two or three industry. Specialty construction is the conjunction point between higher vocational education and society, and also the key to higher vocational education\textsuperscript{[1,2,3]}. The specialty construction is a system engineering, many factors including professional orientation, training objectives, training standards, curriculum system, curriculum construction and teaching resources, training base, faculty, quality assurance etc.. Professional construction is the most important factor affecting teaching quality. This is the education sector, education experts and vocational colleges are very concerned about the problem. The core competitiveness of higher vocational colleges is its professional characteristics. The quality of professional construction in Higher Vocational Colleges represents the quality of talents, and the professional level reflects the strength of the school. What to build and how to build are two problems to be solved. If you can solve these two problems, the quality of professional construction has a basic guarantee. Specialty construction is the foundation and key of Higher Vocational education. Professional construction planning is a long-term development strategy of higher vocational colleges, which is a dynamic, continuous and systematic planning. Accurate positioning is the starting point and the end result of Higher Vocational colleges. This requires rigorous analysis and assessment, neither too high nor too low, otherwise it will affect the effectiveness of planning\textsuperscript{[4,5]}. The core content of the professional development planning in higher vocational colleges is to build their own characteristics and advantages. The construction of teaching staff is the key factor for the
development of professional planning in Higher Vocational colleges. The specialty construction and
specialty construction plan of higher vocational colleges are two concepts which are interrelated and
different. Professional construction focuses on the construction and implementation of the
professional system, while the professional construction planning focuses on the development of
professional development vision[6,7].

2. **Systematic Construction of Vocational Education Specialty**

The specialty construction of higher vocational education is an open system influenced by the
external environment, such as the talent market. Personnel training model, training objectives,
curriculum and curriculum system are affected by the market. Professional construction involves the
core elements of the teaching team, the training conditions inside and outside the school, professional
teaching management. These core elements depend on each other and interact with each other. The
professional construction of higher vocational education should be from the perspective of
professional science. The specialty construction of higher vocational education aims at cultivating
high skilled talents. From the point of view of teaching theory and learning psychology, teaching
mode, course content and mode, teaching organization form, teaching method, teaching evaluation
and so on[8]. The professional attribute of higher vocational education is mainly embodied in the
teaching process of vocational education and the process of action in the field of Vocational
education. Therefore, it is necessary to analyze and practice the specialty of Higher Vocational
Education from many aspects.

2.1 **Objectives of Professional Development**

As an important part of the connotation construction of higher vocational colleges, the purpose of
the specialty construction is to take the social demand as the guidance and the student employment as
the guidance. This mode of training to meet the social and economic, technological development and
industrial upgrading brought about by changes in the labor organization. Through the innovation of
talent training mode, curriculum system, improving the curriculum resources construction, teachers
construction, school teaching conditions and teaching management of the overall progress,
developing regional economy and service industry enterprises need high-quality and high skilled
talents, sustainable development. The construction and evaluation of all elements of the professional
construction should be carried out around the target[9,10].

2.2 **The Constraint of Specialty Construction**

The coherence of the system is mainly reflected in two aspects: one is the connection between the
system and the external environment, and the other is the relationship between the various elements of
the system and the constraints of the second aspects. The professional construction of higher
vocational education needs to go through several stages: setting, construction and adjustment. Each
stage will be affected by the changes of social economy, industry or industrial structure and the social
division of labor. The main factors of the professional construction system are two aspects: the
professional structural elements and the professional construction management elements. The main
structural elements of the system are the internal structure of the system, which is horizontal and
relatively static. The main factor of professional construction management is the external behavior of
the system. The internal elements of a system work together and are indispensable. The construction
of the curriculum system must be completed by a team of experienced teachers. At the same time
inside and outside the school training conditions to continue to enrich and perfect. At the same time to
have a strict teaching management and management as a guarantee[11].

2.3 **Professional Construction of the Relevance and Continuity**

The target of the system element should be in one direction and have the same elements. If the
structure is different, the overall system function is not the same, the elements of the status of the
system in the mercy of what must be clear. In the professional construction, the talent demand analysis
has always been the logical starting point for the professional construction, the core of the personnel
training program design, the curriculum system for the soul to the construction of teachers to ensure
that the training conditions based on the construction of professional teaching Management as a platform. The structure determines the function, and the structure of the organization determines its internal tension. As long as the structure has sufficient control and cohesion, can be successfully completed the task of the organization. But also determines its external expansion of the force, which can adapt to the changes in the environment. The structure of professional construction system in higher vocational colleges should be a closed-loop feedback structure. It continues to drive structural elements through process management elements.

3. Core Technology Course Construction

The core technology professional construction concept is aimed at the higher vocational education construction mode. In the professional theory and practice teaching system construction, curriculum structure construction, practice teaching base construction, teaching materials construction, training mode construction, curriculum construction and other aspects of the formation of the concept. It is very important to strengthen the combination of work and study and the cooperation between schools and enterprises in the process of core technology curriculum construction. The model emphasizes the theory and practice of the two teaching systems are parallel to each other, the integration of cross, vertical convergence, horizontal communication with each other[12,13].

3.1 The Course Structure System of Core Technology Specialty Construction

For each major are the first to clear the professional which includes the core technology and skills. The overall teaching process revolves around the core technical skills, serving the core technical skills. First of all, vocational education units must be with the industry and its enterprises to establish the corresponding capacity of the standard system. This system should include goals from skill zero start, primary, intermediate to advanced level of competency. Second, it is necessary to decompose each level of capacity requirements. Vocational education units should be based on the ability of each level to determine the corresponding modules and curriculum planning. To establish a curriculum system based on ability training. Post ability is a comprehensive goals, the general education is based on the disciplinary system of teaching, students to the post and then comprehensive application. The teaching of vocational education should highlight the application of the post and improve the educational efficiency. The distance between vocational education and practical application is shorter, and it should be closer to the goal. This can not only achieve the high efficiency of education and teaching, but also to achieve the integration of academic education and vocational training, to achieve the integration of employment goals and the development of personality, so that the work can be truly realized[14]. The successful implementation of a professional construction mode must have a set of theoretical and practical teaching system. Teaching should be the core of professional technical skills as the main line of work training. Three years teaching process can be divided into the following four aspects: basic teaching, professional teaching, specialty teaching, graduates project design, post practice, and so on.

4. Core Technology Practice Course Construction

4.1 Post-Practice Mechanism

In the process of building the core technology, the industry and the enterprise engineering and technical personnel from the front of the professional construction began to intervene. Vocational schools with these industry professionals to determine the professional core technical skills standards from the typical job requirements. This ensures that all elements of the industry, business, career and personnel into the professional construction. Vocational schools should ensure and strengthen the openness, pertinence and professionalism of professional construction. It can effectively realize the consistency between students' learning and practical work. Effectively promote the consistency of theory, experiment, practice, practice, post, employment. The examination of the ability of the students should be carried out in combination with the examination and evaluation of the enterprise. Schools and enterprises to jointly develop professional, joint implementation of teaching, training.
students together to provide a platform for the development of students, to achieve the "teaching, learning, doing" integrated training model[15].

4.2 Vocational Qualification Certificate System

Vocational qualification certificate system is an important part of the national labor management, but also an important part of the labor and employment system. The graduation certificate and occupation qualification certificate is a product of different education or training system, the two systems in its structure, basis and training methods, training goal, not only has certain difference, also contact with each other and complement. The two plays an indispensable role in the process of national human resources development. How to integrate the two into a scientific and standardized system of education and training is an important issue to be studied and solved urgently. The core of curriculum knowledge analysis of the technical points, according to occupation requirements, control the National Occupation Classification ceremony and occupation certificate technology knowledge and skills requirements, effectively occupation requirements into the professional teaching system in Higher Vocational education. The school should carry out the teaching training and teaching process with the real task as the driving force and the project as the carrier. In order to promote the establishment of professional certification system, the implementation of the "double certificate" system provides a basis for exchange of knowledge and skills. In the construction of the new profession, we should adhere to the premise of the market demands and take the employment as the guidance and the professional ability training as the core. The curriculum construction should refer to the national vocational qualification assessment standards, clear the core knowledge and technical points of the professional teaching content, and highlight the core competence of students and the ability of sustainable development.

5. Summary and Prospect

The specialty construction of higher vocational colleges is a complex and systematic project, which needs to be designed in a systematic way. Through the innovation of talent training mode, optimizing the curriculum system, teaching team construction, improvement of teaching conditions and teaching management, high-quality skilled talents of all social work can be cultivated to provide services for local economic development. The construction and evaluation of each factor must be subordinated to the overall goal. The development of higher vocational education will be affected by the needs of industry or industrial structure and social demand. In the internal system, the role of various elements, are indispensable. Therefore, it is necessary to strengthen the construction of the curriculum system, the effective organization of the teaching team, the enrichment and perfection of the training conditions and strict teaching management. The professional construction must be based on the market demand analysis of the external environment, focusing on the talent training scheme design, guided by the innovation of talent training mode. To reach such goal the construction of curriculum system is the key while the construction of teaching team and the construction of training conditions are the basis while professional teaching management provides the platform.

6. References


