

The Construction of Curriculum System of “Integration of Courses, Positions, Certificates, and Competitions” for Higher Vocational Software Technology Major under the guidance of “Double High Plan”

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Abstract: This article first analyzes existing problems of the current curriculum system of software technology professional group in higher vocational colleges, and then explains the connotation of constructing a curriculum system of “Integration of Courses, Positions, Certificates, and Competitions” for higher vocational software technology majors, finally discusses on how to build the curriculum system of “Integration of Courses, Positions, Certificates, and Competitions” for Higher Vocational Software Technology Majors from three aspects of job positions, vocational qualification certificates and vocational skills competitions under the guidance of “Double High Plan”.

Keywords: Double High Plan; Software Technology; Integration of Courses, Positions, Certificates and Competitions; Curriculum System

The “Double High Plan” is an important measure to implement our country’s “Vocational Education Reform Implementation Plan”. It aims to concentrate education forces to build a group of “High-Level” higher vocational colleges and “High-Level” majors, which have Chinese educational characteristics and reach the world level of education, can lead our country’s vocational education to continue to deepen reform and development, and achieve high-quality education and teaching. Curriculum construction is the core element of reform and innovation of vocational education. Teachers of higher vocational software technology majors, should build an all-round and multi-angle curriculum system under the guidance of the “Double High Plan”, which is not only conducive to improving teachers’ teaching level, to realize the co-construction and sharing of teaching resources, but also conducive to cultivating the social service and competitiveness of software technology professional talents.

1. The specific situation of the construction of the curriculum system of the higher vocational software technology professional group

The professional teaching covered by the higher vocational software technology professional group includes software technology, mobile Internet application technology, computer application technology and other majors. The professional group focuses more on the practical application level, highlights the comprehensive professional quality, and does not have too high theoretical requirements for students in software development and aims to cultivate high-quality skilled talents that meet the current needs of the software development market. However, as we know, there is a clear derailment between the core curriculum system of the professional group and the actual needs of the society, and the quality of curriculum design is not high. The specific manifestations are as follows:

1.1 Curriculum teaching goals deviate from market demand for talents

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According to the employment-oriented talent training goal of higher vocational colleges, the teaching of higher vocational software technology professional courses should meet the job requirements of current software development projects, so as to achieve the precise positioning of software technical talents. However, since there are very few influential professional teachers and master the software technology professional curriculum teaching in higher vocational colleges tend to deviate from the demand for market. It is understood that the performance of students of this major in National competition for Skills of Vocational Education has not been satisfactory, and the employability of graduates in high-end technical positions is obviously insufficient, and the future employment development space of students has been greatly limited.

1.2 The teaching resources of the traditional curriculum system are backward

Although the teaching resources in the software technology curriculum system are rarely constructed according to the theoretical knowledge system, they are gradually popularized in three-dimensional teaching materials, however, the relevant teaching courseware, exercises, case libraries, etc., currently developed have not yet been based on the latest professional standards, and it is difficult to meet the needs of education and teaching in the modern information age. Higher vocational colleges should take “prominent skills” as the main principle and develop three-dimensional professional curriculum teaching resources with the help of information technology and multimedia technology in the new era, to achieve the purpose of allowing students to carry out ubiquitous learning at any time.

1.3 Insufficient training of professional practical skills and lack of in-depth school-enterprise cooperation

In vocational education, most teachers of professional courses can realize the importance of practical teaching and adopt project-driven teaching mode to carry out practical skills training. However, the selection of project content and teaching implementation are not rigorous enough and fail to strictly follow the real enterprise project process to design practical teaching content, and many of them stay at the level of imitation, and do not really understand the essence of project-driven teaching. In other words, the school-enterprise cooperation is still superficial, failing to play a role in deep collaborative teaching. It is understood that the current school-enterprise cooperation of software technology majors mainly focuses on internships, employment and training. There are not many cases and fields of cooperation between higher vocational colleges and well-known enterprises, and there are deficiencies in the technology integration service level and technical achievement transformation ability

2. The connotation of constructing a curriculum system of “Integration of Courses, Positions, Certificates, and Competitions” for higher vocational software technology majors

“Integration of Courses, Positions, Certificates, and Competitions” aims to optimize the professional curriculum system and improve the quality of talent training, connect the main courses of the software design major with the students’ future jobs, accommodate vocational qualification certificate and vocational skill competitions, decompose the professional abilities required by real job positions, and organize them in accordance with the characteristics of vocational education, and design the corresponding job position knowledge content to penetrate into the professional curriculum teaching, so as to meet the needs of professional curriculum teaching and actual positions; At the same time, teachers should pay attention to cultivating students’ professional qualities, and gradually integrate the knowledge and content involved in the professional vocational qualification certificate into the course teaching, so as to improve the subjective initiative of the students in the professional course learning, and achieve the mutual accommodation of professional course teaching and vocational qualification certificate; Finally, teachers should use the vocational skills competition as the wind vane of the current software technology professional teaching, and as one of the main indicators for weighing the quality of talent training, and incorporate the key knowledge points in the vocational skills competition into the professional courses, so as to effectively mobilize the learning interest of higher vocational students, improve their innovative and creative ability and professional comprehensive quality, so as to achieve the effective integration of professional curriculum teaching and vocational skills competition.

3. The practice of constructing a curriculum system of “Integration of Courses, Positions, Certificates, and Competitions” for higher vocational software technology majors

3.1 Use job corresponding ability requirements as the basis for the construction of the curriculum system

The training of software technology professionals in higher vocational colleges must first be in line with the job requirements, which is the starting point of professional curriculum design. Teachers should make a comprehensive and in-depth research on the software technology industry, understand the main job positions corresponding to the professional group, and set up corresponding professional courses in combination with these positions, and accurately locate the real job tasks by setting courses based on job position and guided by market demand. At the same time, in order

to improve the professional sustainable development ability of students, teachers should extract the comprehensive abilities from work tasks that students should have, based on the result-oriented teaching theory, and describe them from the social perspective, knowledge level, and method application. After setting up the curriculum and determining the goal of talent training, choose the course teaching content based on the enterprise application, software technology industry needs, the ability required by the job position, and the professional quality.

3.2 Take the requirement of vocational qualification certificate as a supplement of the curriculum system

Vocational qualification certificates are the professional knowledge and job skills certificates that practitioners must have in order to engage in a specific or related occupation in the future, and are widely recognized by the country and IT industry. It can be seen that the vocational qualification certificate has a positive and important influence on the future employment of students. Therefore, teachers should organically integrate professional curriculum teaching with vocational qualification certificates and use them as a supplement to the professional curriculum system, which will help improve the quality of talent training. Currently, professional qualification certificates for software technology include “JavaWeb Application Development” 1+X certificate, “Big Data Analysis and Application” 1+X certificate, “Mobile Application Development” 1+X certificate, etc. The knowledge content assessed by these certificates generally involves related professional courses, for example: “JavaWeb Application Development” 1+X certificate involves Java programming, MySQL database, Java Web framework development and other courses. When designing courses, teachers should split and resolve the key knowledge related to obtaining these certificates, and make a reasonable connection with professional curriculum teaching according to the teaching principles of simple to difficult, shallow to deep teaching. This will not only help students better master the teaching content, but also help students improve their professionalism, adding weight to their future participation in employment competition.

3.3 The demand for high-precision and sophisticated abilities required for vocational skill competitions is used as an increase in the curriculum system

The Vocational Skills Competition is a high-tech professional competition developed in accordance with the national vocational skill standards and in accordance with a realistic working environment and process. It can better demonstrate the comprehensive professional qualities and core competitiveness of higher vocational students. Teachers should fully understand the competition conditions, standards, and environment requirements of various related competitions, and develop software technology professional curriculum systems in a targeted manner, and evaluate students according to the competition standards of vocational skills competitions. Through the model of promoting teaching by competition and promoting learning by competition, the effective connection between professional curriculum teaching and the vocational skills can be realized.

4. Conclusion

The construction of higher vocational software technology curriculum system must be guided by job positions, vocational qualification certificates and vocational skills competitions. Professional courses should be rationally adjusted, and course content should be optimized according to the job position requirements, the teaching assessment should be carried out according to the assessment method of the vocational qualification certificate, and the difficulty level of teaching should be set based on the important and difficult points of the vocational skill competition, so as to form the curriculum system of “Integration of Courses, Positions, Certificates, and Competitions” for higher vocational software technology majors. In this way, it will comprehensively help vocational students improve their comprehensive professional literacy and core competitiveness, and improve their future employment and entrepreneurship. At the same time, in the process of the course system practice, teachers can be forced to take the initiative to innovate their knowledge structure and improve the teaching design ability of professional courses. Teachers’ own teaching level will also be significantly improved, and the teaching can be effectively improved.

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