

Construction practice of training system structure for high-end manufacturing professionals in higher vocational colleges

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Abstract: This paper analyzes the background of "Post course Competition Certificate + Ideological and political integration", points out the actual needs and development significance of "Post Course Competition Certificate + Ideological and political integration" for training high-end manufacturing professionals in higher vocational colleges, and tries to start from the level of education, professional construction and teaching implementation. This paper discusses the key strategies of the structure construction of the high-end professional talent training system of "post course competition certificate + ideological and political integration", hoping to provide reference for the research and practice of strengthening the high-end manufacturing professional talent training in higher vocational colleges.

1. Introduction

In the National Vocational Education Conference held in 2021, the concept of post course competition certificate was clearly put forward, requiring the formation of a comprehensive education mechanism oriented to post course competition certificate. Vocational colleges need to take the post course competition certificate as an important measure to improve the vocational education personnel training system and promote the quality of personnel training. In this context, the curriculum ideological and political construction focuses on educating people, and the post course competition certificate focuses on educating talents. The integration of the two in the structure of high-end professional personnel training system has become an important measure of education reform in higher vocational colleges.

2. Background of "Post Course Competition Certificate + Ideological and political integration"

At the National Conference on Vocational Education, relevant researchers clearly put forward the urgent need for vocational colleges and high-end professionals. Vocational colleges should strive to improve the adaptability of vocational education, accelerate the construction of modern vocational education system, and focus on training more high-quality and high-skill talents. Talent training

should closely follow the development direction of technological change and industrial optimization and upgrading. Higher vocational colleges should connect the talent chain with the industrial chain and the education chain. Under the background of the comprehensive revitalization of the manufacturing industry, high-end manufacturing equipment and process technology are applied in engineering practice, and the scale of high-end manufacturing professionals required for the use and maintenance of high-end manufacturing equipment is constantly expanding. As an important base for the delivery of high-end talents for the manufacturing industry, the structure of the talent training system must be innovated and optimized in combination with the needs of professional development, and adjusted for the training goals of high-skill and high-level manufacturing professionals, so as to keep up with the pace of development of The Times and promote the continuous improvement of the output standards of manufacturing students. It is of great practical significance and value to construct and optimize the training system structure of high-end manufacturing professionals with the core orientation of "post course competition certificate + ideological and political integration".

3. The significance of constructing "Post class competition certificate + Ideological and political integration"

The development mode of "post course competition certificate + ideological and political integration" is of great significance to the embodiment and development of students' individual value. Vocational colleges guide students to make positive progress by carrying out vocational teaching activities, and promote the overall improvement of individual professional technical skills and quality. "Post course competition certificate + ideological and political integration" is an important interactive content of talent training in higher vocational colleges, and the integration of the two is of great significance to the improvement of students' composite vocational ability and the realization of individual value. In the process of job course certificate, the ideological and political elements of the course are fully excavated, refined and applied, guiding students to form correct professional beliefs and moral concepts, and promoting students to actively participate in the development of job practice and skill competition consciousness, so as to internalize and form their overall development.

4. Practical measures for the construction of the system structure for training high-end manufacturing professionals

4.1 The top-level system mechanism should be established at the education level to provide important guidance for the education practice.^[1]

First of all, higher vocational colleges need to combine their own school-running characteristics and type positioning to form a system of education. From the perspective of the realization of all-round education goals, this paper analyzes the post course competition certificate and ideological and political integration, and introduces a series of guiding opinions and implementation measures to promote the construction of multi-dimensional collaborative education system from the perspective of its own school-running characteristics, so as to provide practical reference for the development of training activities for high-skilled talents such as manufacturing majors.

Secondly, from the perspective of social development needs, the curriculum structure system is comprehensively planned. In the process of training high-end manufacturing professionals in higher vocational colleges, whether professional talents can match the current needs of high-quality development of national industries has become the most concerned issue in the construction of talent training system structure. As the management of higher vocational colleges, they must fully

consider the trend and change of the social development area, understand the needs of The Times in terms of professional ability, professional quality and ideological and political quality of talents in high-end manufacturing industry, clarify the types and forms of professional courses, rationally optimize the structure of course credits and hours, and form a good matching relationship with the goal of talent training. Higher vocational colleges should promote the benign unity and development of curriculum supply and education objectives.^[2]

4.2 The professional construction layer promotes the optimization of personnel training system, and realizes the synchronous development of post class competition certificate and ideological and political integration.

First of all, the collaborative education function of post class competition certificate and ideological and political integration is fully brought into play, and the "1+X" verification standard is formed by referring to the standards of manufacturing industry, and the standard of skill competition is coordinated to achieve the effective unity of the quality, knowledge and ability of manufacturing professionals.^[3]New technologies, processes and norms contained in the post course competition certificate are incorporated into the knowledge and ability training objectives of manufacturing majors, and ideological and political literacy education in the context of ideological and political integration is matched with professional literacy education, which is jointly reflected in the quality training objectives.

Secondly, it is necessary to integrate the two collaborative education functions into the manufacturing curriculum system. As an important manifestation of the professional knowledge and skill system, the setting of the curriculum system will directly affect the cultivation of high-level talents in the manufacturing profession. When setting the curriculum system of manufacturing specialty, it is necessary to refine the typical tasks of manufacturing positions in enterprises, fully grasp the needs of professional literacy and the composition of knowledge and skills, consider the individual development of students and society, and reflect the modular characteristics of the curriculum system setting. At the same time, from the two aspects of enterprise positions and skills competition, the professional spirit and competitive spirit are extracted, and as the key entry point of ideological and political integration, the education resources and curriculum resources are matched to promote the further improvement of knowledge and skills learning quality.

Finally, from the perspective of combining the two with the talent training model, higher vocational colleges should actively build a platform for industry-university-research cooperation, keep close contact with government departments, manufacturing professional industry associations and professional development, and build a diversified cultivation model. On this basis, we will promote the realization of process integration practice activities for students majoring in manufacturing. Under the background of curriculum carrier, we will realize the combination of post course competition certificate and ideological and political integration, innovate the teaching mode, actively explore course resources, match with the needs of enterprises' manufacturing post ability, and promote the improvement of students' social adaptability.

4.3 The teaching implementation layer promotes the deepening development of teaching reform and gives full play to the value of collaborative education.

First of all, the curriculum standard is revised to clarify the course orientation. Taking the computer-aided manufacturing position of manufacturing specialty as an example, the oriented task with ability training as the core is formed, and the teaching content of the course is selected to highlight the role and purpose of the course learning of this specialty.^[4]In the context of course linkage, students are guided to introduce new course learning based on the course knowledge

learned, exert the effect of learning transfer, and form small-scale professional comprehensive practical training, including the epidemic of professional content such as computer-aided design, mechanical parts quality inspection and mechanical drawing, which corresponds to the requirements of manufacturing post capacity of enterprises and is reasonably introduced into course teaching activities.^[5]

Secondly, through the way of integrating the post course competition certificate, the students' skills can be improved reasonably. Based on the enterprise survey data, the matching relationship between the course learning content and the actual job content of manufacturing professional positions is determined, the job ability is analyzed, and the skill standards of students required by the course are defined. The manufacturing job engineering is object-oriented, and enterprise cases that meet the teaching requirements are selected as the teaching project carrier, and the process of basic skills, core skills and comprehensive skills are followed. The design of the teaching process is completed in a progressive manner. At the same time, from the perspective of the integration of course competition, the unique advantages of vocational skills competition should be brought into play, and the purpose of promoting teaching and learning by competition should be achieved through the integration of course competition.

5. Conclusion

The comprehensive promotion of curriculum ideological and political construction in higher vocational colleges is a strategic measure of the fundamental task of moral education. The combination of values, knowledge imparting and ability training in curriculum ideological and political construction activities is of great significance to guide students to establish a correct world outlook, outlook on life and values, and is an important content of the talent training system. The construction of "Post course competition certificate + Ideological and political integration" for the training system of high-end manufacturing professionals in higher vocational colleges can promote the cultivation of compound talents with high-end professional quality and skill level.

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