

Exploration on the Construction of the Curriculum System of International Cruise Management in Higher Vocational Colleges Based on the Integration of On-the-Job Courses, Competitions and Certificates

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Abstract: The integration of "on-the-job courses and competition certificates" is one of the important modes for training innovative technical talents and promoting the teaching reform of vocational education. It has the characteristic advantages of hierarchical skills system, diversified teaching situations and diversified learning evaluation. The construction of the course system of "on-the-job course competition certificate" is faced with such problems as inconsistent generation logic, complex internal system and difficult teaching implementation. The solution lies in starting from the learner centre, straightening out the logic with the concept of professional ability growth, integrating the system with the principle of docking posts and working processes, and enabling the course implementation with a multi-level and multi scene teaching mode.

1. Introduction

Vocational education is a type of education with the same important status as general education. Compared with general education, vocational, technical and practical are the core characteristics of vocational education as a type of education. The characteristic education mode of vocational education has been actively explored in the aspects of course post connection, work study combination, apprenticeship training for many years, but there are still practical problems such as the disconnection between talent training and post demand, the lack of in-depth cooperation between schools and enterprises, and the low level of talent training. The integration of "on-the-job courses and competition certificates" is a more flexible and effective education mode formed by China's vocational education through active exploration and practice on the basis of summing up the traditional education and teaching experience of combining work with learning. It has the characteristic advantages of hierarchical skill system, diversified teaching situations and diversified learning evaluation. Reconstructing the integrated curriculum system of "on-the-job course competition certificate" based on the growth of vocational ability is of great value to the teaching

reform of vocational education under the type characteristics.

2. The Current Situation of the Integration of " On-the-job Courses, Competitions and Certificates"

"Post course" integration is the basic mode of vocational education curriculum construction. The national vocational education reform implementation plan requires "docking of teaching process and production process" and takes it as the basic standard of curriculum standard setting in vocational colleges[1]. "Post course" integration mode refers to the training standard based on the industry post, scientific analysis of the internal requirements of the post, and the refinement of the theoretical knowledge, operational skills and professional quality required by the professional post into the curriculum of higher vocational colleges. Through the teaching mode of project guidance, task driving and work study alternation, the teaching process and production process, curriculum standards and post standards are integrated. To enable students to have the knowledge, ability and quality required to complete typical work tasks, and to realize the integration of enterprise post ability requirements and school professional curriculum.

In the integration of "courses and competitions", the competitive projects and standards of skills competition are closely connected with the needs of industrial posts and technology, which are forward-looking and leading, and are the wind vane of vocational education curriculum reform. "Class competition" integration is to combine the curriculum system of the higher vocational talent training program with the professional competition, and integrate the items, norms and evaluations in the competition into the curriculum and teaching process, so as to standardize and standardize the skills teaching. At the same time, the teaching effect formed by "class competition" integration is conducive to cultivating students' professional honour, vocational education self-confidence and improving the quality of talent training.

"Course certificate" integration refers to finding the combination point of the two according to the requirements of skill level certificate or vocational qualification certificate standard and professional teaching standard, adjusting the talent training scheme, organically integrating the content of certificate training into the teaching of professional courses, integrating the teaching content into the knowledge, skills and quality requirements specified in the certificate, and the teaching assessment standard shall rely on the acquisition standard of the certificate, So that the academic certificate can truly form a joint force with the vocational skill level certificate. The certificate is the quantitative assessment of the post standard. The certificate system can be divided into low, medium and high. Therefore, the integration into the curriculum system should be hierarchical and gradual. The certificate system is closely related to the industrial organization mode and production technology, with flexible adjustment and short cycle, and the certificate system itself has the characteristics of complete modularization. Therefore, when it is transformed into teaching content, it should also maintain its relatively independent modularization characteristics. During the adjustment of certificate standards and contents, the adjustment of individual course modules can be targeted to improve the technical progressiveness and industrial adaptability of vocational education courses.

3. Perplexity of Curriculum System Construction Based on the Integration of " On-the-job Courses, Competitions and Certificates"

3.1 The Generation Logic of "on-the-job Courses, Competitions and Certificates" is Inconsistent and the Integration is Difficult

3.1.1 The Generation of "Post"

Post refers to the demand for professional posts, including the demand for the number of employees and the demand for post qualification conditions[2]. The demand for the number of post employees is related to the development of the industry with the market, technological changes, organizational models, etc. In addition to the objective conditions such as age and education, the post qualification conditions include the experience, quality and ability related to the occupation, which are the core content of the post requirements and reflect the internal requirements of the professional ability. The text presentation of the post requirements is the post standard system. The enterprise standard system requirements defines the post standard system as "a scientific organic whole formed by the standard with the post operation as the constituent element and the internal connection, which is implemented by the enterprise to realize the effective implementation of the basic guarantee standard system and the product realization standard system". This is also the basic generation logic of the post standard system. For technical talents, professional ability is the concentrated expression of operational skills and technical knowledge, which can be formed through training and improved through production.

3.1.2 The Generation of "Lessons "

The course which is the fundamental carrier for colleges and universities to realize talent training, and also the final foothold of education and teaching reform. The meaning of the curriculum includes: first, the planning and design of the educational objectives, teaching contents and activities; second, the content and implementation process of the teaching plan, outline and teaching materials. In form, it is the curriculum system and curriculum standards. In the process of continuous improvement, the vocational education curriculum has formed a system and standard that is different from the general education, that is, to break through the knowledge construction mode and build the vocational education curriculum based on the ability standard and application. The construction of the curriculum is based on the learners. First of all, it must meet the basic requirements of academic education, take education as the first priority, promote the comprehensive development of students, and highlight the learning of knowledge system and skill system.

3.1.3 The Generation of "Competition"

The competition is a professional skill competition activity, which refers to a mass competitive activity organized and carried out according to the national professional skill standards, the demand of economic and social development for skilled personnel, the actual production, operation and management services, and the assessment of operational skills as the main content. The vocational skill competition is an evaluation of the skill level of professional and technical personnel. It is aimed at the contestants and highlights the professionalism and competitiveness. It is a demonstration and benchmark of the skill level. Its generation is based on the high-quality development of the industry and the actual needs of social human resources. It aims to lead and improve the professional skill level, promote the craftsman spirit and create a good social atmosphere.

3.1.4 The Generation of “Certificate”

The certificate is a vocational qualification certificate and a vocational skill level certificate. Professional qualification certificates include access qualification certificates and level evaluation qualification certificates, which are mainly recognized by national human resources and social security departments and industries. The vocational skill level certificate is the certificate of vocational skill level, which reflects the comprehensive ability required by professional activities and personal career development, and is recognized by the vocational education and training evaluation organization. Therefore, the certificate is aimed at the pre job personnel with employment needs[3]. Its contents and standards are directly connected with the professional knowledge, professional skills and professional qualities required by the real posts or job groups of the enterprise during the development process, reflecting the new technologies, new processes, new plans and new requirements of the industry, representing the professional skill level requirements of the posts, with the characteristics of professionalism and mercerization.

To sum up, due to the differences in the object-oriented, implementation subject and production demand of post, course, competition and certificate, their generation logic, basic characteristics and value orientation are also inconsistent, resulting in different standards, processes and evaluation dimensions, so it is difficult to integrate.

3.2 The Internal System of " On-the-Job Courses, Competitions and Certificates" Is Complex, and it is Difficult to Eliminate the Bad and Retain the Good

3.2.1 The Post Standard Lacks Authoritative Unified Standard

The needs of enterprises are generally reflected in job training specifications, operation instructions, operation specifications, employee manuals, etc. In China, most of the job standards are developed by enterprises according to their own needs, and do not have universality and authority. Although the skill level standard of 1 + X certificate is designed for the needs of Posts and skilled personnel, its coverage and enterprise recognition still need to be improved.

3.2.2 The System of Vocational Skill Competition Is very Complicated

At present, the skill competition in the field of vocational education is mainly the National Vocational College skill competition. The competitions with high social and industrial recognition include the world skills competition, the vocational skills competition of the people's Republic of China, and the provincial skills competition. In addition, there are provincial industry competitions, special competitions, and special competitions held by industry associations and enterprises. There are many kinds of vocational skill competitions with uneven quality. Even for the skills competition of vocational colleges, due to the limitations of standards, competition system, hardware and other conditions, there are some problems such as focusing on basic vocational skills, not being closely and timely connected with new technologies, and being disconnected from the actual needs of posts.

3.2.3 The Adjustment and Change of the Vocational Certificate System are Large

The state implements standardized management of vocational qualification certificates, and relevant departments cancel the vocational qualification of personnel with skills in level evaluation step by step, and promote socialized vocational skill level recognition. In the national vocational qualification catalogue (professional qualification and technical personnel) issued by the Ministry of human resources and social security in January 2021, only 58 professional and technical personnel vocational qualification certificates are reserved, including 31 admission and 27 level

evaluation. Correspondingly, the pilot work of the 1 + X certificate system was rapidly started and gradually promoted. From February 2019 to December 2020, the Ministry of education identified 447 vocational skill level certificates for pilot work of the 1 + X certificate system, involving 348 training evaluation organizations. The new and old certificates alternate and change greatly. It is difficult to select certificates in the process of financing.

3.3 Diversified Teaching Elements and Difficult Teaching Implementation

3.3.1 Hierarchy of Teaching Objectives

The diversification of student source structure after the expansion of higher vocational education promotes the reform of vocational education teaching ecology. At the same time, the social responsibility of both education and training requires that vocational education courses should not only meet the academic education needs of school students, but also meet the skills training needs of social personnel and enterprise employees. Different learning subjects from different sources have great differences in their learning demands and knowledge reserves. For different learners, the curriculum system integrated by "on-the-job courses, competitions and certificates" faces the problem of improving adaptability. Therefore, it is necessary to build a more flexible and effective teaching implementation scheme to achieve the hierarchical teaching objectives and personalized teaching scheme.

3.3.2 Diversified Teaching Situations

The educational goal of vocational education is to train highly skilled personnel with solid professional knowledge, skilled professional skills and professional norms. The educational goal determines the curriculum system, and it determines the teaching situation. However, limited by the teaching hardware conditions and management mode of the school, the existing curriculum system has significant space and time constraints. The integrated curriculum system of "on-the-job course competition certificate" takes the docking of posts and production processes as the basic principle, and integrates more modular skills training and real professional quality learning. In particular, it needs to create a diversified teaching field and teaching situation across borders. Therefore, teachers, equipment, venues and other resources need to be reconfigured, and the school's governance and management mode also needs to be innovated. In addition, the high requirements for real work scenes and small class teaching, as well as the contradiction between the limited training venues and the expanding student teacher ratio in colleges, also exist at the same time.

3.3.3 Diversified Teaching Evaluation

The professional curriculum system of the school should be integrated with the professional ability of the post, competition projects and certificate standards. The integration and reconstruction of its content determines that the implementation of the curriculum is coordinated by many parties. The subject of curriculum evaluation is diversified, and the evaluation standards are also diversified. However, the initiative of enterprises to participate in the whole process of teaching is not high, and even if there is a standardized evaluation system, the implementation is not strict, and the conversion mechanism of credit banks at the university level is not perfect. After integration, due to the different emphasis of course learning, examination and participation in competitions, conflicts are likely to occur, and it is difficult to form a perfect teaching evaluation system and a correct evaluation orientation.

4. The Scheme Design of Constructing the Integrated Curriculum System of " On-the-job Courses, Competitions and Certificates"

4.1 Clarify the Integration Logic of " On-the-job Courses, Competitions and Certificates" with the Concept of Professional Ability Growth

The basic logic of the integration of "on-the-job courses and competition certificates" is to form an organic knowledge and skill network based on the common characteristics and internal relations of the four elements, with the enterprise's on-the-job skills, competition projects and certificate standards as the carrier, and with the professional ability growth as the main line, to make up for the ability defects and practice disconnection in the traditional knowledge chain. It is the fundamental purpose to train technical and skilled personnel who meet the industrial needs. "On the job" is not only the source and basis of "competitions" and "certificates", but also the value orientation and significance[4]. Therefore, "post" is the basic basis for talent training and the cornerstone of the harmonious relationship. The integration of the certificate into the curriculum system improves the pertinence of talent training. The examination of the certificate has the dual functions of educational knowledge examination and professional qualification recognition. "Competition" is the benchmark of talent training, which plays a guiding and demonstration role in the accommodation relationship. Curriculum is an important carrier of talent training, and also the medium of "on-the-job course competition" and the visual presentation of results.

The basic principle of the integration of "on-the-job courses, competitions and certificates" originates from the industrial post standards and production processes, and is the integration and penetration of industrial technology at different levels and in different aspects. The logical starting point for the reform of the professional curriculum content under the guidance of "post course competition certificate" is derived from the post, based on the post and service post. Schools and enterprises, in accordance with the post ability requirements, integrate the professional qualification standards and professional skills competition standards, and take into account the future development needs of students, take the training of professional talents as the starting point, and focus on the logical relationship between post abilities, Take the docking of professional standards and work processes as the main basis for the formulation of curriculum content, prepare curriculum content that conforms to students' cognitive laws and professional growth laws, form a curriculum objective that integrates students' professional ethics, professional skills, post ability and professional awareness, and achieve the goal of setting courses based on posts. Find the appropriate professional course as the carrier and integrate the "course certificate" according to the certificate standard and training system. Take the 1 + X certificate as an example, the chapters, sections and knowledge points in the course are corresponding to the work tasks, fields and skills points in the certificate. Select the key entry point, transform the contents of the competition project into teaching to form the curriculum module, and transform the resources of the competition into project to form the teaching resources, which are embedded in the teaching of professional courses. At the same time, the mutual recognition of "certificate competition Courses" is implemented. The participating students can take part in the competition to replace the study of the corresponding professional courses. They can obtain the corresponding course results according to the specifications and results of the competition. The students who have obtained the certificate can also directly obtain credits and be exempted from the relevant professional courses.

4.2 Enable the Implementation of the Course System of "On-the-Job Course Competition Certificate" with the Teaching Mode of Multi-Level and Multi Scene

In the face of different types of students, starting from the actual conditions such as the learning

situation, learning ability and learning purpose of various types of students, it is the natural path of education and teaching reform in vocational colleges to carry out layered teaching, classified guidance and standard assessment. The basic vocational ability standards shall be formulated based on the job requirements, all of which shall meet the requirements. Meanwhile, the special training forms such as excellent long-term classes, innovation classes and mass entrepreneurship and innovation societies shall be explored to guide students to form a cooperative and mutual aid learning mode and extend their innovative and composite abilities. Individualized classified assessment will be taken as an important guarantee for the implementation of the curriculum system, and the competition award, comprehensive assessment of professional quality, standardization and professionalism of post practice projects, and examination certificates will be included in the comprehensive assessment system of the curriculum. Qualitative assessment integration will replace quantitative assessment, highlight the process assessment, pay attention to the differences and levels of assessment, and form a more effective assessment system. With the continuous development of simulation technology, simulation technology and virtual reality technology in teaching practice, there are more means to meet the needs of multi scene teaching based on professional activities. Multi scene teaching activities need to make full use of internet teaching platform, cloud technology, VR technology and other information tools to upgrade the traditional teaching mode and create a visual learning environment with a stronger sense of experience. Make the internal and external training bases interconnected through information technology, explore the interactive distance teaching mode between schools and enterprises, and create a "strong interaction and high intelligence" smart classroom in various forms such as internet teaching classroom, wireless interactive classroom and VR virtual classroom; The student-centered learning and training will create an immersive career scene through the combination of virtual and practical operation. The students will strictly implement the standardized operation process, perform the enterprise safety and management procedures such as registration, inspection and confirmation, and integrate the rigorous and practical professional quality cultivation into the training. For the difficulties and key points that are difficult to carry out in practice, the students will combine the virtual simulation training system, through the virtual simulation Immersive participation in the form of game level to master the professional knowledge and skills required by the post; And by recording students' learning behaviors, intelligently planning learning paths, formulating personalized teaching plans, improving learning efficiency, stimulating students' motivation for active learning, and forming an independent, personalized and ubiquitous learning mode.

5. Summary

Post course competition certificate is the direction and goal of sustainable and optimized development of higher vocational colleges. Although there are still many difficulties and problems, the process of improvement is the process of continuous promotion of Vocational Education in China. To find the means and methods of on-the-job course certification that are suitable for our national conditions and higher education. Further deepen the reform of talent training program, build a curriculum system based on "integration of on-the-job courses, competitions and certificates", further improve the teaching level and education quality, enhance the employment competitiveness of students, and expand employment and entrepreneurship channels.

In the future, we should clarify the main responsibility, and play the role of leadership coordination to form a teaching team. Clarify the main responsibility and work of "post course competition certificate" in the process of teaching reform, and make the overall plan of teaching reform. With the active cooperation from all departments and departments of the school, the

administrative functions were effectively played, and the reform of "post course competition certificate" was taken as a key educational reform project of the school and further promoted. All functional departments of the school have fully concentrated resources, providing sufficient technical and theoretical support for the implementation of "post course match certificate" teaching, research and innovative development of teaching. Accurately grasp the pulse of social development and the development needs of vocational students, find a new breakthrough to promote the development of higher education, and actively innovate the teaching content carrier of post course competition certificate. Proceeding from the theme of teaching, the school has given play to the advantages of running a school with its own characteristics, followed the development of the times and industries, and solved the concerns of students, which not only meets the needs of students' academic qualifications, but also effectively stimulates the students' awareness of independent learning and expanding their horizons, trains a group of experienced teachers in schools, and carries out a variety of practical activities. In terms of content, methods, etc., more attention is paid to the pioneering, integrating a variety of interactive teaching methods, network interactive teaching feedback, etc., skilfully bringing into the connotation and essence of enterprise posts, and achieving the educational purpose in a variety of classroom teaching activities, under the role of attractive and subtle influence. Improve the evaluation criteria of teaching effect, and establish an evaluation and incentive mechanism with teaching effect as the main goal. The establishment of a "double evaluation" system and standard for teachers and classroom effects has strengthened the two-way evaluation and proportion of teachers and classroom effects in colleges and universities[5]. The two-way evaluation of teachers' and students' performance in on-the-job course certification teaching will be included in the quality standard of student training, teachers will be evaluated and scored, and students' evaluation feedback will be valued. Further strengthen teachers' knowledge and skills, establish a long-term mechanism for teaching effect evaluation, and further improve the assessment mechanism for teachers' professional title selection qualification under the guidance of graduate employment data and enterprise feedback. Give full play to the role of school education as the main channel to the greatest extent, reverse the phenomenon of emphasizing education and neglecting education in the process of professional education construction, and achieve all-round development. It breaks through the barriers to professional training for all teachers in colleges and universities, optimizes the process of all teacher training, and provides all-round professional education training and teaching resources. Establish the principal responsibility consciousness, teaching achievement incentive system, cooperative team combat ability and work incentive system. Establish a post course competition certificate coordination department to do a good job of teachers' professional training. Experts from all parties can be added to the newly opened post course competition certification training course. Teachers of all kinds can improve the team's professional ability, and help students understand their future jobs more comprehensively.

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