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Practical Strategies for Higher Vocational Professional Curriculum Education under the Orientation of Application Ability

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ABSTRACT
Higher vocational education aims to cultivate technical and skilled talents who can meet the job requirements. Accordingly, the cultivation of application ability has become the core content of professional curriculum construction in higher vocational colleges. This paper determines the value logic from three aspects: the decomposition of job competence elements, the construction of curriculum support system, and the calibration of vocational demand goals. Then, it explores practical paths for the generation of application ability, including innovating teaching paradigms, integrating educational resources, and strengthening college-enterprise collaboration. On this basis, it establishes a guarantee system to implement ability-oriented evaluation, improve the dynamic regulation mechanism, and consolidate the construction of teaching staff, in order to build a trinity practical framework of "value construction-path innovation-guarantee improvement", provide practical guidance for the reform of professional courses in higher vocational colleges, improve the quality of technical and skilled talent cultivation, and meet the demand for high-quality applied talents in the industrial transformation and upgrading.

KEYWORDS
Higher vocational colleges; Professional courses; Application ability

1 Introduction

With the iterative upgrading of the industrial structure and the diversified development of vocational post requirements, the core objective of talent cultivation in higher vocational education has shifted from knowledge acquisition to application ability generation. However, some professional courses in higher vocational colleges currently have multiple challenges such as unclear orientation of post competencies, a single practical teaching carrier, and insufficient depth of college-enterprise cooperation. Taking the cultivation of application ability as the fundamental orientation, in combination with the laws of talent cultivation in higher vocational colleges and the characteristics of vocational posts, this paper clarifies the logic of ability generation, innovate practical education models, and improves the guarantee mechanism to make the curriculum system precisely align with post requirements and the teaching process deeply integrate with production practice, thus injecting impetus into the high-quality development of higher vocational education and cultivating compound technical and skilled talents that meet industrial needs.

2 Value Construction of Professional Curricula for Application Ability

2.1 Deconstruct Post Competency Elements and Clarify the Core Generation Logic

In the practice of higher vocational professional curriculum education under the orientation of application ability, it is first necessary to delve into the elements of post competencies and clarify their generation logic. Through systematic investigations of post requirements in industries and enterprises, it analyzes the demands of typical work tasks and vocational abilities, and implement deconstruction and generalization of these elements, thus obtaining a clear list of qualities. On this basis, it further explores internal connections and logical relationships among various competency elements, and determines basic laws and key links of competency generation to provide a basis for setting curriculum objectives and selecting content. The deconstruction of post competency elements enables professional courses to precisely align with vocational needs, ensures the consistency between curriculum content and post requirements, provides a solid guarantee for the generation of application ability, and avoids the disconnection between curriculum content and vocational practice, thereby improving the pertinence and effectiveness of talent cultivation.

2.2 Align with the Laws of Competency Generation and Build a Curriculum Support System

In the context of high-quality development of vocational education, the reform of teaching models in higher vocational colleges directly affects the improvement of students ' application abilities and professional qualities [1]. And a curriculum support system that conforms to the laws of competency generation is the core carrier of teaching model reform. Competency generation is a gradual and spiral process, and the curriculum structure and content sequence should be designed in accordance with the principles of progressing from simple to complex, from single to

comprehensive, and from basic to application. By establishing a modular curriculum system and converting post competency elements into specific curriculum modules and teaching units, the connection between competency cultivation and curriculum teaching can be effectively achieved. At the same time, emphasis should be placed on the integration of theory and practice, and project-based teaching, case teaching, situational teaching and other methods can be adopted to enable students to learn and practice in real or simulated work contexts, and promote the transformation of knowledge into competencies. The establishment of a curriculum support system should reflect the phased characteristics of competency generation, ensure that students can receive corresponding training and improvement at different learning stages, and form a complete cultivation chain.

2.3 Align with Career Development Needs and Calibrate and Generate the Objective Orientation

With the implementation of curriculum reform and quality-oriented education, the teaching effectiveness of courses in higher vocational colleges needs to be aligned with the needs of career development [2]. It requires higher vocational colleges to take the initiative to conduct post demand research in leading enterprises and small and medium-sized innovative enterprises in the industry, sort out the knowledge, skills and quality requirements corresponding to each career stage, and integrate national vocational qualification standards and industry technical specifications into the curriculum objective system. At the same time, these colleges should consider the trend of regional industrial upgrading, and adjust the key part of curriculum content based on the talent requirements of new positions emerging in fields such as intelligent manufacturing, digital economy, and modern service industries, so that the trained students can not only meet the current job requirements, but also have the potential for career development. In addition, they should establish a "college-enterprise linkage" goal calibration mechanism, invite industry experts and enterprise mentors to participate in the argumentation and revision of curriculum objectives, and optimize cultivation objectives according to the feedback from enterprises and the results of graduate tracking surveys. Through a precisely calibrated objective orientation, the curriculum teaching can closely follow the context of career development, ensure that students can quickly adapt to post work after graduation, provide support for students' long-term development, and achieve a positive interaction between talent cultivation and career development.

3 Practical Paths for the Generation of Application Ability

3.1 Innovate Teaching Implementation Paradigms to Facilitate the Progressive Generation of Competency

The cultivation of innovation ability is the core component of vocational education. By taking into account the characteristics and cultivation objectives of students in higher vocational colleges, exploring reforms in teaching methods and instructional design can enhance students' theoretical knowledge and practical abilities [3]. Higher vocational colleges need to adopt a teaching model centered on students and oriented towards action. They should employ modern teaching methods such as project-based teaching, case teaching, and task-driven teaching, and simulate the classroom as a real working environment to guide students to learn by doing and do while learning. For example, when offering the "Live-streaming E-commerce Operation" course in the e-commerce major, teachers can design a real project of campus agricultural products live-streaming sales, and divide students into different post groups corresponding to various functions in actual operation of enterprises. In terms of instructional design, in accordance with the phased laws of competency generation, learning tasks should be arranged progressively, starting from basic skill training, gradually moving towards comprehensive project training and complex engineering problem-solving. This innovation in teaching paradigms can mobilize students' internal learning motivation, enable them to gradually establish a competency system from single skills to comprehensive application during the process of completing specific tasks, and achieve a spiral rise in application ability.

3.2 Integrate Multi-Dimensional Educational Resources to Consolidate the Carrier of Competency Generation

The generation of application ability requires rich and high-quality multi-dimensional educational resources to serve as the foundation, and higher vocational colleges should break through the barriers between on-campus and off-campus resources, and build a resource system that integrates both virtual and real elements, and emphasizes both software and hardware. In terms of hardware, higher vocational colleges should focus on building a number of college-enterprise cooperation training bases that are in line with the industry's cutting-edge level and linked to actual post requirements, enabling students to have access to frontline enterprise operating environments on campus. By actively collaborating with leading enterprises in industries, higher vocational colleges can transform hardware resources such as production workshops and research centers in enterprises into off-campus training bases, achieving seamless integration of on-

campus hardware with real enterprise equipment. For example, in the nursing major, a medical training base equipped with high-fidelity human models, intelligent monitors, and simulated operating rooms can be configured. In terms of software, a resource development team composed of professional teachers, industry experts, and enterprise technical backbone members should be formed to jointly create a digital resource library that covers all professional courses and incorporates the latest industry standards and typical work case videos, so as to achieve the goal of dynamic updating and sharing of resources. Through the integration of on-campus and off-campus, as well as online and offline resources, a three-dimensional resource network supporting the generation of application ability can be formed, thus providing a solid platform for students ' practical operation, technical research, and innovation ability cultivation.

3.3 Strengthen College-Enterprise Collaborative Linkage to Expand the Scenarios for Competency Generation

Strengthening college-enterprise collaborative linkage is an important way to expand the scenarios for generating application ability and achieve the in-depth integration of industry and education. Higher vocational colleges should carry out in-depth cooperation with industry leaders to jointly formulate talent training plans, develop curriculum materials, and implement teaching evaluations. Meanwhile, higher vocational colleges should introduce real production tasks and technical problems from enterprises into the classroom through creating industrial colleges, master studios and other approaches, enabling students to improve their vocational competencies in the process of solving practical problems. Moreover, higher vocational colleges should improve the training mechanism for dual-qualified teachers, arrange teachers to take temporary positions in enterprises, and employ enterprise technical backbones as part-time teachers to achieve two-way flow of teachers between colleges and enterprises. For example, the mechatronics major can employ senior engineers from enterprise as part-time teachers at colleges, who come to colleges twice a week to teach practical operation courses on intelligent manufacturing production lines, and guide students to complete graduation design projects based on real enterprise orders, thereby making students access the most advanced technologies and real production problems in industries in the classroom, and narrowing the gap between theoretical learning and post practice. Such collaborative linkage can expand the scenarios for competency generation from a closed campus to an open society, and ensure the precise alignment of talent cultivation specifications with enterprise employment needs.

4 Development Guarantee for the Achievement of Application Ability

4.1 Construct a Competency-Oriented Evaluation to Verify Actual Results of Generation

The enhancement of the effectiveness of curriculum education is crucial for the implementation of the fundamental task of fostering virtue and cultivating talents. Therefore, it is necessary to build a teaching evaluation system that is both scientific and practical [4]. This evaluation system focuses on the comprehensive assessment of students ' practical abilities. Diversified evaluation criteria should be established to examine whether students can apply the knowledge they have learned to solve practical problems, their proficiency in operational skills, and their comprehensive performance in work contexts. In terms of evaluation methods, a combination of progressive and formative evaluations should be widely adopted, and various approaches such as observation records, project reports, practical operation assessments, work exhibitions, and enterprise evaluations should be used to collect evidence of students ' ability development. In particular, industry and enterprise standards should be introduced, and requirements for vocational qualification certificates and job operation specifications should be incorporated into evaluation indicators to achieve the alignment between college evaluation and social recognition. Evaluation results should be promptly fed back to teachers and students. They should be used to determine the achievement of students ' abilities, and as an important basis for improving teaching, thereby forming a virtuous cycle and truly exerting the guiding and promoting role of evaluation on the generation of competencies.

4.2 Improve the Dynamic Regulation Mechanism to Iterate Competency Generation Schemes

In order to adapt to the ever-changing industrial environment and the development of science and technology, it is necessary to improve the dynamic adjustment mechanism to ensure the advancement of professional curriculum education capability training plans and their alignment with the characteristics of the times. This mechanism requires the regular collection and analysis of feedback information from various aspects such as the tracking survey of graduate employment quality, the assessment of students' learning outcomes, and the analysis of industry technology development trends, to comprehensively evaluate the degree of alignment between the current cultivation plan and off-campus demands. Based on the diagnosis results, a standardized curriculum content update procedure can be formulated to promptly incorporate new technologies, processes, and standards into teaching, and eliminate outdated

knowledge and skill requirements. The teaching process management should be dynamically optimized, and teaching methods, teaching rhythms, and resource allocation should be adjusted based on the actual learning situation of students and the changes in their ability development. By synchronously promoting the development of goals, contents, paths and industries of competency generation, a continuous improvement closed loop of monitoring, evaluation, adjustment, and optimization can be formed to enhance education ' s responsiveness to changes in market demand.

4.3 Strengthen the Construction of Teaching Staff to Empower the Process of Competency Generation

Teachers are the main implementers of competency-oriented education, and building a high-level and professional "dual-qualified" teaching team is the support for ensuring the effective implementation of the competency generation process. The construction of the teaching staff should be advanced from multiple aspects. Firstly, it is necessary to improve the enterprise practice system for teachers, and require professional teachers to regularly take temporary positions, provide technical services, and engage in job practice in cooperative enterprises to master production processes, technical standards, and industry information, thereby continuously updating their practical experience and industry knowledge. Secondly, it should build diversified professional development platforms for teachers to enhance their instructional design, practical guidance and technology innovation abilities through conducting special training, teaching competitions, technical seminars and other activities. Thirdly, it is essential to improve the two-way flow mechanism fro college-enterprise personnel, and and employ technical backbones and management elites from industry and enterprises as part-time teachers or industry mentors to participate in curriculum teaching, practical training guidance, and other links, and bringing the latest practical wisdom into the classroom. Fourthly, it need to reform the teacher evaluation and incentive mechanism, and incorporate teachers ' participation in curriculum reform and guidance of student practice into performance assessment to create a favorable atmosphere that values practical teaching and advocates technical skills, and fully mobilize the internal initiative of teachers to engage in competency-oriented teaching reform.

5 Conclusion

Oriented by application ability, the practice of higher vocational professional curriculum education should be based on value construction, take practical paths as the main body, and be supported by development guarantees to form a complete educational loop. This system focuses on the entire process from competency generation to achievement, and emphasizes clarifying the logic of post competencies, innovating teaching models, and strengthening college-enterprise cooperation to solve the disconnection between theoretical teaching and practical application. Only by adhering to the ability orientation and constantly updating the teaching system according to vocational needs can the professional application abilities of higher vocational students be steadily improved, and high-quality technical and skilled talents be cultivated for related industries, thus demonstrating the value of higher vocational education.

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