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The Value, Positioning and Path Exploration of Vocational Undergraduate Talent Cultivation

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Abstract: Vocational undergraduate education, as a key link in improving the modern vocational education system, has become an important direction for the reform of higher education in China. This article elaborates on its multiple values from three aspects: improving the vocational education system, serving industrial upgrading, and enhancing the status of talents. This paper conducts a positioning analysis of talent cultivation from six dimensions: type, level, goal, specification, course, and major. It also proposes paths to enhance the cultivation of vocational undergraduate talents from four perspectives: industry-education integration and collaborative education, optimization of the curriculum system, construction of "dual-qualified" teachers, and diversified dynamic evaluation, providing an important reference for the high-quality development of vocational undergraduate education.

1. Introduction

With the transformation and upgrading of China's economic structure and the advancement of industries towards the medium and high end, the shortage of high-level technical and skilled talents has become a key bottleneck restricting high-quality development. The problem of "hierarchical barriers" in the traditional vocational education system has become increasingly prominent. Exploring the development of undergraduate-level vocational education has become a strategic choice to solve the structural contradiction on the supply side of talents. As a key component of the modern vocational education system, the development of vocational undergraduate education has become an important measure to optimize the structure of higher education and serve high-quality economic development. This article, by sorting out the value and positioning of vocational undergraduate talent cultivation, focuses on the improvement path of vocational undergraduate talent cultivation, and provides a reference for steadily promoting the high-quality development of vocational undergraduate education.

2. The value of cultivating talents in vocational undergraduate programs

2.1 The Connotation of Talent Cultivation in Vocational Undergraduate Programs

Before elaborating on the connotation of vocational undergraduate talent cultivation, it is necessary to first define the core concepts such as vocational undergraduate education and talent cultivation. Vocational undergraduate education is different from both vocational junior college education and

applied undergraduate education. Compared with vocational junior college education, vocational undergraduate education has multiple characteristics such as high-end orientation towards industries and sectors, compound technical and skill requirements, more solid theoretical knowledge, and stronger independent innovation capabilities. Compared with applied undergraduate education, vocational undergraduate education pays more attention to the cultivation of technical and skilled talents. Therefore, vocational undergraduate education can be understood as undergraduate-level vocational education that serves the high-end of industries, combines theory with practice, takes job capabilities as the orientation, and cultivates innovative talents through the integration of industry and education. Talent cultivation is at the core of the work of colleges and universities. Through comprehensive education such as course teaching and practical training, talents with solid disciplinary foundations, strong innovation capabilities and good professional qualities are cultivated. Through the analysis of the above concepts, we can understand the connotation of vocational undergraduate talent cultivation as: In terms of type, it adheres to the attribute of vocational education; in terms of level, it meets the standards of undergraduate education. It combines "higher" and "vocational" features, and is oriented towards the high-end of industries and digital transformation. Through a training model that integrates industry and education and combines theory with practice, it aims to cultivate high-level technical and skilled talents who are compound and innovative and capable of solving complex problems.

2.2 The Value of Vocational Undergraduate Talent Cultivation

2.2.1 Improve the modern vocational education system and promote the diversified development of education types

The rise of vocational undergraduate education marks the transformation of China's vocational education from a single level to a multi-level and integrated system. For a long time, vocational education has only reached the junior college level, which has blocked the academic advancement channels for technical and skilled talents and led to a relatively low social recognition. The establishment of vocational undergraduate education has broken through this "ceiling", building a complete chain from secondary vocational education to higher vocational education, vocational undergraduate education and professional degree postgraduate education, and achieving the "dual-track parallel" of vocational education and regular undergraduate education. This not only elevates the status of vocational education but also offers students diverse educational options, meeting the needs of different learners and injecting new vitality into economic and social development.

2.2.2 Serve industrial upgrading and high-quality economic development, and fill the gap of high-end skilled talents

As a high-level component of the vocational education system, the core value of vocational undergraduate education lies in providing high-quality technical and skilled talents for the country's industrial upgrading and high-quality economic development. With the accelerated advancement of the global technological revolution and industrial transformation, China is transforming from a "manufacturing giant" to an "intelligent manufacturing power". The demand for talents in emerging industries such as artificial intelligence, high-end equipment manufacturing, and new energy is increasing day by day. Vocational undergraduate education focuses on the cultivation of technical application and innovation capabilities, integrating enterprise demands into the curriculum system, enabling students not only to master operational skills but also to solve complex problems in production practice.[1] By cultivating high-level technical and skilled talents with solid theoretical foundations and excellent practical abilities, the talent gap in the high-end links of the industrial chain

can be effectively filled. From an international perspective, the successful practices of German universities of applied Sciences and Japanese universities of technology and science demonstrate that vocational undergraduate education is an important cornerstone supporting a manufacturing power. The development of vocational undergraduate education in our country can not only enhance the competitiveness of the industrial chain but also contribute to high-quality economic development.

2.2.3 Enhance the social status of technical and skilled talents to facilitate the construction of a skill-oriented society

The establishment of vocational undergraduate education helps to reverse the traditional prejudice of society towards vocational education and change the notion that "general undergraduate education is valued while vocational education is underestimated". By awarding vocational undergraduate degrees, the state has established the equal status of vocational education at the legal level and enhanced its social appeal. For students, vocational undergraduate education offers a parallel path to further education to regular undergraduate programs, enabling them to realize their life value by leveraging their skill advantages. In addition, vocational undergraduate education can meet the society's demand for highly skilled labor and promote the formation of an atmosphere throughout society that respects skills and values the spirit of craftsmanship. [2] This not only promotes educational equity but also lays the foundation for the construction of a skill-oriented society, achieving a positive interaction between personal development and social progress.

3. The positioning of talent cultivation in vocational undergraduate programs

3.1 Type Positioning: The cultivation of vocational undergraduate talents places greater emphasis on vocational nature

In terms of type classification, vocational undergraduate education first emphasizes the feature of "occupation". Unlike regular undergraduate programs that focus more on theoretical research, vocational undergraduate programs not only emphasize the improvement of students' theoretical knowledge but also pay more attention to the combined cultivation of practical abilities and technical application skills, enabling students to possess comprehensive qualities for solving complex vocational problems. Compared with other types of undergraduate programs, vocational undergraduate programs are oriented towards professional competence, based on vocational and practical foundations. They closely respond to the trends of industrial chains and technological innovation, cultivating "technical people" and "professional people" with technical application capabilities and core professional qualities. This promotes the upward movement of the ability levels of technical and skilled talents, thereby better serving the needs of national strategies and industrial development.

3.2 Hierarchical Positioning: The cultivation of talents in vocational undergraduate programs places greater emphasis on high-level levels

The high-level positioning of vocational undergraduate education is reflected in the deep alignment between the talent cultivation goals and the demands of industrial upgrading. Facing the development trend of intelligent production, vocational undergraduate education not only focuses on basic skills training, but also attaches great importance to cultivating high-quality talents who can master complex technologies and adapt to high-end positions. Compared with higher vocational colleges and junior colleges, the high-level talent cultivation of vocational undergraduate education is not merely a simple extension of the training period from three years to four years, but should be

reflected in the improvement of training quality and the value change of ability level. Specifically, it is manifested as follows: First, the systematicness and theoretical depth of the knowledge structure have been enhanced, enabling students to possess the ability to analyze, optimize and innovate technical solutions; Second, the complexity and transferability of professional capabilities are more prominent, enabling one to be competent for comprehensive work across multiple fields and positions. Third, the sustainability of development potential has been enhanced. By improving innovative thinking and lifelong learning capabilities, the demand for highly skilled talents in the dynamic development of the industry can be met. The high-level positioning of vocational undergraduate education is reflected in the cultivation of high-level technical and skilled talents who can not only solve complex engineering problems but also promote technological upgrading, providing strong support for the modern industrial system.

3.3 Target Positioning: The cultivation of vocational undergraduate talents places greater emphasis on innovation and adaptability

The goal orientation of vocational undergraduate education focuses on cultivating high-level technical and skilled talents who possess both innovative spirit and professional adaptability. Against the backdrop of the intelligent transformation of industries, vocational undergraduate education emphasizes the cultivation of systematic knowledge structures and compound abilities, enabling students to not only quickly adapt to the demands of current positions but also proactively respond to future career changes. Its training characteristics are mainly reflected in the following aspects: First, it builds a three-dimensional knowledge system of "basic theory + professional practice + innovative thinking", strengthening students' ability to analyze and solve complex technical problems; Second, it is important to focus on cultivating core capabilities such as the application of digital tools and cross-disciplinary collaboration to enhance students' adaptability in dynamic working environments. Third, it emphasizes the cultivation of innovative consciousness and sustainable development literacy, enabling students to possess the key capabilities for technological innovation and career transformation.

3.4 Standards Positioning: The cultivation of vocational undergraduate talents places greater emphasis on the compound type

The standards of vocational undergraduate education are centered on cultivating compound technical and skilled talents, meeting the multi-dimensional demands of industrial upgrading for high-quality talents, and focusing on building a three-in-one capability system of "technical depth + knowledge breadth + innovation dimension". In terms of professional ability cultivation, we should break through the traditional single-skill training model and build a interdisciplinary and multi-field compound knowledge structure. In terms of cultivating comprehensive qualities, emphasis is placed on fostering students' thinking ability to apply systematic knowledge to solve complex engineering problems and enhancing their adaptability in emerging fields such as intelligent manufacturing and industrial Internet. In terms of career development, through modular curriculum design and project-based teaching, students' job transfer capabilities and potential for sustainable career development are enhanced, providing high-quality, compound technical and skilled talents with multi-dimensional competitiveness for the modern industrial system.

3.5 Course Positioning: The cultivation of vocational undergraduate talents places greater emphasis on practicality

Vocational undergraduate education emphasizes practicality in its course positioning. By

strengthening the deep integration of theory and practice, it constructs a practical teaching framework of "platform + module". In the course design, real industrial projects are introduced into teaching to enable students to master technical application skills in real professional contexts. In terms of course content, it emphasizes a step-by-step progression, from basic skills training to comprehensive problem-solving, gradually enhancing students' practical abilities and innovative thinking. In terms of the curriculum system, through modular design, it not only covers the basic knowledge of the discipline but also highlights the flexibility and adaptability of technology application, providing students with diversified practical paths. In terms of course development, vocational undergraduate courses emphasize the collaboration between industry and education. Relying on platforms such as industrial colleges and school-enterprise co-built training bases, they directly integrate enterprise technical standards and job demands into course development to ensure that teaching content keeps pace with industrial development.

3.6 Professional Positioning: The cultivation of talents in vocational undergraduate programs places greater emphasis on connection

Vocational undergraduate education, as a key link in China's vocational education system, prominently demonstrates the multi-level and multi-dimensional connection characteristics of its professional positioning, and has established a three-dimensional talent cultivation connection mechanism. From a vertical connection perspective, vocational undergraduate programs have effectively integrated the training channels from secondary vocational education to higher vocational education, undergraduate education, and even professional master's degrees, forming a complete vocational education talent cultivation system. This connection is not only reflected in the improvement of academic qualifications, but also emphasizes the progressive nature of training standards, making the educational content at each stage both independent and organically connected, truly breaking the "ceiling" of vocational education development. In the dimension of horizontal connection, the construction of vocational undergraduate programs emphasizes precise alignment with industrial demands. By establishing a professional dynamic adjustment mechanism, closely tracking the development trends of key regional industries and strategic emerging industries, the deep integration of professional chains and industrial chains can be achieved. Vocational undergraduate programs also pay attention to the design of the connection of students' development paths, building a connection system of "academic certificates + vocational skills level certificates" to open up the growth channels for technical and skilled talents. This design not only meets students' immediate employment needs but also reserves space for their lifelong learning and career development, embodying the sustainable development concept of talent cultivation.

4. The improvement path for the cultivation of vocational undergraduate talents

4.1 Deepen the integration of industry and education and innovate the mechanism of collaborative education between schools and enterprises

The integration of industry and education is an important measure for vocational undergraduate education and can be continuously deepened and improved in three aspects: First, vocational undergraduate universities can establish a "benefit-sharing" cooperation model, and encourage enterprises to participate deeply through tax incentives, policy subsidies, etc., such as jointly building industrial colleges or technology research and development centers. Second, vocational undergraduate universities can implement a "dual-mentor system", where technical experts from enterprises and teachers from the institutions jointly teach to ensure that the course content is in line with job standards. [3] Third, vocational undergraduate universities need to establish productive

training bases, introduce advanced equipment and technologies from enterprises, and achieve the integration of "teaching - production - research and development".

4.2 Optimize the curriculum system and strengthen the orientation of technical knowledge and ability

First, the curriculum system can adopt a model that connects public basic courses, professional basic courses and core courses for positions, which not only consolidates the disciplinary foundation but also highlights the professional characteristics. Moreover, through modular design, it breaks the disciplinary boundaries and achieves cross-disciplinary integration and reconstruction. Second, the practical teaching system integrates various forms such as experiments, practical training, and internships, and constructs a progressive model of "teaching and practical training - comprehensive practical training - production practical training". Thirdly, the teaching mode is dominated by project-based teaching, introducing real project cases. Through complex engineering project tasks, it cultivates students' practical abilities and innovative thinking, and adopts collaborative and team-based teaching methods to enhance communication and cooperation skills.

4.3 Strengthen the construction of the teaching staff and build a high-level "dual-qualified" team

Vocational undergraduate teachers should possess both theoretical depth and practical experience. First of all, vocational undergraduate universities need to improve the entry standards for teachers, requiring professional course teachers to have working experience in enterprises, implement a "fixed position + mobile position" mechanism, and attract industry experts to teach part-time. Secondly, vocational undergraduate universities need to establish school-enterprise cooperation bases and encourage teachers to take advantage of their holidays to go to enterprises for on-the-job learning to improve their professional skills. [4] Finally, we can draw on the experience of German vocational education and establish a dual-title system of "professor + engineer" to enhance the capabilities of the teaching staff.

4.4 Improve the evaluation system to achieve dynamic assessment by multiple subjects

A scientific evaluation system is the key to ensuring teaching quality. First, a four-dimensional evaluation framework of "government - industry - school - student" can be established to highlight the effectiveness of industry-education integration. Second, vocational undergraduate universities can adopt a "process-oriented + value-added" evaluation method to track the growth trajectory of students' abilities from enrollment to employment. [5] Third, universities can establish a dynamic feedback improvement mechanism, apply the evaluation results to course adjustments and resource allocation, and form a closed-loop management.

5. Conclusion

As an important component of China's modern vocational education system, vocational undergraduate education not only fills the gap in the cultivation of high-level technical and skilled talents, but also provides strong support for industrial upgrading and high-quality economic development. This article systematically explores the key issues in the cultivation of vocational undergraduate talents from three dimensions: value, positioning and path, and proposes to comprehensively enhance the quality of vocational undergraduate talent cultivation through paths such as deepening the integration of industry and education, optimizing the curriculum system, strengthening the construction of teaching staff, and improving the evaluation system. In the future,

vocational undergraduate education should further strengthen its type characteristics, highlight the organic integration of "higher education" and "vocational education", and at the same time pay attention to dynamic adjustment and innovation to adapt to the rapidly changing industrial demands and technological changes, laying a solid foundation for the construction of a skill-oriented society.

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