Research on the Talent Training Mode of Three-chain Fusion and Five-dimensional Integration of Higher Vocational Mechanical and Electrical Majors

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With Abstract: the continuous transformation and upgrading of manufacturing digitalization and intelligence, the demand for composite, innovative technical skills talents is Higher becoming increasingly urgent. vocational colleges shoulder the heavy responsibility of transporting high -quality technical and technical talents for regional economic development. We must actively adapt to the demand for economic development on the reform of talent structure. The article analyzes the problems existing in the training of mechanical and electrical professionals. Through the reconstruction of the curriculum system, it establishes a talent training system, and lays a talent training system for regional development and industrial economic transformation and upgrading.

Keywords: Electromechanical Major; Three -chain Fusion; Five-dimensional Integration; Talent Training Mode

1. Introduction

In order to promote the high -quality development of vocational education, the state has issued the "Opinions on Deepening the Construction of the Modern Vocational Education System", "Implementation Plan for National Vocational Education Reform", and "Occupational Education Industry and Education Integration Envoy Action Implementation Plan (2023-2025) " a series of documents, proposed that the integration of vocational education and education has truly become a "booster" for industrial development. Through the in -depth cooperation of school -enterprise and enterprise, we can effectively achieve the education chain of education, integration of education, integration of

production and education, and industry -academia cooperation, extend the education chain, service industry chain, build a talent chain, and enhance the value chain of the value. The ability to work clever craftsmen and great powers lays a solid foundation [1]. This article combines the current status of the training of electromechanical professionals in higher vocational mechanical and electrical professional and proposes the talent training model of "three -chain integration and five -dimensional integration" to provide more theoretical research and practical exploration the training of higher vocational for mechanical and electrical professionals.

2. Existing Problems in the Cultivation of Higher Vocational Mechanical and Electrical Professionals

2.1 The School-enterprise Cooperation Mechanism Is Not Sound Enough, and Talent Training Is Disconnected from Market Demand

School-enterprise cooperation is an effective way to improve the quality of the training of mechanical and electrical professionals, but the current school-enterprise cooperation mechanism is not yet complete. At present, although many higher vocational colleges have established cooperative relationships with enterprises, in the process of actual cooperation, due to the lack of effective mechanism protection, the effect of cooperation is not satisfactory. It is mainly manifested in the unclear cooperation goals, in -depth cooperation, and single cooperation models. Many school-enterprise cooperation only stays at the surface level. For example, enterprises provide internship opportunities for students, schools send graduates to enterprises, etc., and lack of in -depth cooperation in technology research and development, curriculum development, and teacher training Essence.^[2]

2.2 School-enterprise Cooperation Is Not Deep Enough, Professional Development Lags Behind Industrial Development

Due to the different value orientation of the the enterprise. there are school and inconsistent interests of interests. The school pays more attention to talent training, scientific research, and academic reputation. Enterprises pay more attention to economic interests, market competition and technological innovation. The inconsistencies of interests have led to insufficient motivation for cooperation between the two parties. Technology, equipment and resources. professional development and adjustment of the adjustment and upgrading of the industrial structure have led to the relatively lagging teaching resources of the school and cannot meet students' needs for advanced technology and knowledge. The knowledge and skills that students learn in schools may have a large gap with the actual needs of the enterprise, which affects students' employment competitiveness and career development.

2.3 The Integration of Production and Education Is Not Deep Enough, and the Teaching Process Is Disconnected from the Production Process

The government lacks clear policies and institutional support in promoting school -enterprise cooperation. The motivation and enthusiasm of enterprises to participate in talent training are not high, and the integration of production and education is difficult to deepen. The school cannot understand the latest development and changes in the market demand in a timely manner, which leads to content lagging teaching behind the development of the industry; there is a gap between the theoretical knowledge that students learn in the school and the actual needs of the enterprise. The use of theoretical knowledge in practical work has led to the disconnection of theory and practice; students lack the opportunity to cultivate vocational literacy and practical ability in the real working environment, making students lack competitiveness in the employment market and difficult to adapt to the actual needs of enterprises.

3. The Talent Training Ideas of "Three-chain Integration and Five-dimensional Integration" of Higher Vocational Mechanical and Electrical Majors

3.1 Serve the National Strategy and Clarify the Goals and Directions of Talent Training Higher vocational mechanical and electrical majors should be closely connected to major national strategic needs, such as intelligent manufacturing, new energy, high -end equipment and other fields, and clarify talent training goals and directions. Through in -depth understanding of national strategy and development trends. industrial timelv adjustment of professional positioning and talent training direction, ensuring that the cultivated talents can provide strong support for the development of national strategic industries.

3.2 Three Chain Fusion, Cultivate High-quality Technology and Talents

The "professional chain + industrial chain + innovation chain" three chain fusion is an important way to cultivate high -quality technical and skilful talents. By strengthening the top -level design, establishment of cooperation mechanisms, optimizing curriculum settings, strengthening practical teaching, and cultivating innovation spirit, it can promote deep integration and coordinated development between the three chains to provide strong talent guarantee for industrial development and social progress^[3].

3.3 Five-dimensional Integration, Comprehensively Improve the Comprehensive Quality of Students

The Five -dimensional integration of the "Course Class Certificate" is an effective mode of comprehensively improving the comprehensive quality of students. By integrating the five dimensions of job curriculum requirements, content, skill competition. vocational qualification certificate, innovation and and entrepreneurship, the organic whole is formed students cultivate 'professionalism, to professional skills, innovative spirit and practical ability, and lay a solid foundation for

students' future development Essence^[4].

4. Higher Vocational Mechanical and Electrical Professional Talent Training Path

4.1 Three-chain Integration and Construction of Professional Ability to Build a Practical Teaching System

Guided by modern vocational education requirements, based on vocational ability standards and professional teaching standards, and led by the educating concept of "morality and cultivation, comprehensive development", guided by job ability needs, "professional chain + industrial chain + industrial chain + Innovative chain" three-chain integration, build basic capabilities-core capabilities-comprehensive ability-job ability and professional ability progressive practice teaching system.

The cultivation of basic ability is mainly through the study of public basic courses and professional basic courses, so that students can master basic knowledge and skills. The cultivation of core capabilities, mainly through the study and practice of professional core courses, enables students to have the ability to work in a certain professional field. The cultivation of comprehensive capabilities mainly enables students to have the ability to cross -domain cooperation and solve problems through graduation design, comprehensive training, and innovation and entrepreneurial practice. ^[5] The training of job ability is mainly through corporate internship and post training to enable students to have the ability to appoint a specific position.

4.2 Establish a Three-dimensional Interaction Talent Training Path

Incorporate industrial needs into the education system, take the School of Industry as the carrier, and the enterprise participates in the training of talents throughout the process. Interaction between three-dimensional interaction between talent training paths.

First of all, the school realizes the sharing and complementarity of educational resources through the cooperation with the School of Industry and Enterprises. As a bridge between schools and enterprises, the School of Industry has introduced the actual needs of the enterprise and the latest technology to school

teaching to help the school update the teaching content and methods. At the same time, the school also provides enterprises with talent support and technical services to promote the innovative development of enterprises. This interactive model makes school education closer to market demand and improves the targeted and effectiveness of talent training.^[6] Secondly, the interaction between teachers, students and enterprise engineers is mainly reflected in practical teaching and project cooperation. Teachers and enterprise engineers jointly guide students to perform practical operations and project development, so that students can master professional skills and the ability to solve problems in the real working environment. At the same time, students have also participated in project practice to understand the operation methods and market needs of the enterprise and prepare for future employment and career development. This interactive model not only improves students' practical ability and comprehensive quality, but also promotes professional exchanges and cooperation between teachers and enterprise engineers.

Finally, interaction between talent training, team building, and technical services is an important feature of higher vocational education. Through strengthening the construction of the teacher team, improving the teaching level and scientific research ability of teachers, and providing powerful teachers' guarantees for talent training. At the same time, the school also pays attention to the improvement of technical service capabilities. Through cooperation with enterprises, technology research and development and achievement transformation have been promoted to promote the upgrading and development of the industry.^[7] This interactive model makes talent training more in line with market demand, team building is more efficient and powerful, and technical services are closer to industrial reality.

4.3 Construct a Five-dimensional Talent Training System of "Job Course, Competition and Certificate Creation"

Guided by market demand, with the core goals of improving the professional ability of students and comprehensive quality, through the integration of job requirements, professional courses, skills competitions, qualification certificates, and innovation and entrepreneurship, to comprehensively improve students' professionalism and comprehensive ability, so Adapt to rapid market demand and social development ^[8].

4.3.1 Fusion of post classes

"Palace" is a job, which reflects professional ability and job needs. The fusion of the job means that the curriculum design must be closely focused on the requirements of actual work. The school and the enterprise cooperate depth understand the specific in to responsibilities, skills requirements and development trends of the post, and transform these requirements into curriculum goals and teaching content to ensure that students' learning is closely related to use ^[9].

4.3.2 Class fusion

"Certificate" usually refers to a professional qualification certificate or skill level certificate, which is an important basis for evaluating the professional knowledge and skills of students. Curriculum integration requirements Curriculum teaching and vocational qualification certification standards are relative to ensure that students can meet the corresponding occupational qualification requirements while completing the curriculum learning, and obtain certificates smoothly, thereby enhancing employment competitiveness.

4.3.3 Fusion of lessons

"Sai" refers to various vocational skills competitions. The fusion of the lesson is to integrate the content, standards and requirements of the skill contest into daily teaching. By participating in the competition, students can test the application ability and actual operation level of the knowledge learned. At the same time, competitions can also stimulate students' learning interest and competition awareness and promote the improvement of teaching quality.

4.3.4 Creating fusion

"Innovation" refers to innovation and entrepreneurship. Curriculum integration aims to cultivate students' creative thinking and entrepreneurial ability. Through the establishment of innovative and entrepreneurial courses, organizing entrepreneurial lectures and practical activities, the school guides students to pay attention to market opportunities, identify entrepreneurial risks, and learn business model design and

other knowledge to lay the foundation for future innovation and entrepreneurship.

5. Improve the Quality Guarantee Mechanism and Evaluation System of Talent Training

5.1 Quality Guarantee Mechanism for Talent Training

5.1.1 Construct a guaranteed system for multiple parties

Schools, enterprises, governments, and society participate together to form a diversified and three -dimensional guarantee system. As the main place of education and teaching, the school assumes its main responsibilities; as the demander of the talents, enterprises also need to participate in the process of talent training; the government provides macro guarantee for talent training through policy guidance and support;^[10] The financial society has conducted external supervision of the quality of talent training through third -party evaluation and public opinion supervision.

5.1.2 Improve the internal quality management system

The school needs to establish a comprehensive quality management system, including teaching quality monitoring, student management, teachers' construction, and practical teaching. By formulating scientific and reasonable teaching plans, strengthening teaching process monitoring, improving student evaluation mechanisms. and strengthening the construction of teachers, the quality of talent training is steadily improved.

5.1.3 Strengthen practical teaching links

Practical teaching is an important feature of higher vocational education and a key link for improving the quality of talent training. Schools need to strengthen cooperation with enterprises, jointly build a practical teaching base, improve the practical teaching system, and ensure that students can master professional skills in practice.

5.2 Quality Evaluation System of Talent Training

5.2.1 Establish a diversified evaluation system The quality evaluation of talent training needs to consider multiple factors in multiple aspects, including the knowledge of students' knowledge, the level of practical skills, and comprehensive quality. Therefore, it is necessary to establish a diversified evaluation system, and adopt a variety of evaluation methods and methods to ensure the comprehensiveness and objectivity of the evaluation results.

5.2.2 Introduce a third -party evaluation mechanism

In order to enhance the fairness and authority of the evaluation results, a third -party evaluation mechanism needs to be introduced. Third -party evaluation agencies can be composed of industry associations, professional institutions, enterprises, etc. to evaluate and supervise the quality of talent training in schools.

5.2.3 Pay attention to the application of evaluation results

The results of the evaluation are not only the feedback of school talent training, but also the guidance of future work. Schools need to carefully analyze the results of the evaluation, find out existing problems and deficiencies, formulate improvement measures and implement them into actual work. At the same time, the evaluation results need to be announced to the society and accept social supervision and evaluation.

6. Conclusions

The talent training model is an effective way to achieve the goal of talent training. Through the implementation of the talent training model of "three -chain integration and five -dimensional integration", the quality of talent training in higher vocational mechanical and electrical majors has been significantly improved. The in -depth fusion of the professional chain, the industrial chain and the innovation chain makes the professional setting closer to market demand, and the content of the curriculum is more in line with the industry's development trend; through the implementation of the five -dimensional integration curriculum system of the "job of the job", encourage students to participate in scientific research projects, innovation and entrepreneurship, innovation and entrepreneurship Practice has cultivated students' innovative consciousness and practical ability, improved the employment competitiveness and adaptability of graduates, and provided strong talent support for the technological industry's innovation and industrial upgrading.

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