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Research on the Reform and Construction of Talents Training Mode Based on Modern Apprenticeship

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Abstract: Modern apprenticeship is a talent training mode in which schools cooperate with enterprises to strengthen practical teaching with teachers. Promoting modern apprenticeship is the inevitable requirement of social and economic development, and the conclusion of the reform and development of vocational education talent training mode. The practice of our school in exploring modern apprenticeship system shows that the implementation of modern apprenticeship in higher vocational education should solve the problems of education mode, student identity, curriculum system, tutor mechanism and evaluation method from five aspects: building a "dual subject" talent training mode, solving the problem of "dual identity" apprenticeship, forming a "dual system" school enterprise curriculum structure, building a "dual tutor" full-time and part-time teacher team, and establishing a "dual standard" evaluation system.

Keywords: Modern apprenticeship; Talent cultivation; Integration of production and education; Cooperative education.

1. Introduction

We will thoroughly implement the spirit of the National Vocational Education Conference, fully implement the new apprenticeship system for enterprises with Chinese characteristics, and provide strong talent and skills support for high-quality development. We will deepen the integration of production and education, school enterprise cooperation, further improve the school enterprise cooperation education mechanism, innovate the training mode of technical talents, and improve the quality and pertinence of talent training. Actively serve the requirements of the current economic and social development, and open up and broaden the channels for the training and growth of technical talents.

2. Research Objectives

The modern apprenticeship system is a typical model to achieve the integration of industry and education and the "dual" education between schools and enterprises through the in-depth cooperation between schools and enterprises, the joint training of teachers and teachers, and the dual identity of students and apprentices, with the goal of cultivating high-quality technical talents. The apprenticeship system follows the training law of technical talents, which is the basis for the in-depth development of technical talents and the construction of a skilled society.

The training objects of the pilot major of modern apprenticeship include the graduates of our vocational colleges. With the introduction of the enrollment expansion policy of higher vocational education, it has become the basic trend of the reform and development of vocational education in China to build a vocational education system that faces all the people, runs through the whole life cycle and serves the whole industry chain.

2.1. Research Contents

Starting from the connotation and characteristics of modern apprenticeship, we should understand the current situation of talent training in higher vocational education in China, analyze the shortcomings of the existing talent training model in higher vocational education, and give full play to the "model of talent training model reform in order saving, customized and targeted vocational education" of our mechanical manufacturing and automation specialty based on the advanced experience of modern apprenticeship at home and abroad and the actual situation of our higher vocational education, And the leading role of "Liaoning Modern Apprenticeship Reform Demonstration Major" to promote the reform of talent training mode of modern apprenticeship higher vocational education serving regional economy.

According to the characteristics of major equipment manufacturing, the apprenticeship system implemented by our school mainly adopts two cooperation modes. Our school has established the "Great Craftsman Studio", which is the carrier to deepen the reform of talent training mode according to the four in one talent training idea of "student → apprentice → post → post". In the mode of introducing enterprises into the school, our school, together with Wuhan Huazhong CNC Co., Ltd., established Liaoning Vocational Education “Revitalize Liaoning Province” Industrial College. Give full play to the industrial advantages of industrial enterprises, integrate the resources of colleges and enterprises, serve the regional economic development, deepen the integration of industry and education, carry out modern apprenticeship and order making training, and promote the reform of talent training mode and education and teaching.

We have conducted in-depth cooperation and communication with enterprises in terms of apprentice recruitment, master selection, course content, teaching standards, quality assurance, etc. Build a high-level team of double qualified teachers. Enterprise teachers undertake the important teaching tasks of the college, and teachers from both schools and enterprises flow smoothly. In accordance with the requirements of the connection between the major and industry, the connection between the curriculum content and the professional standard, and the connection between the teaching process and the production process, the characteristic standard of the modern new apprenticeship system of "professional standard - post standard - professional standard - curriculum standard" is established. The university and enterprises jointly study and formulate talent training

plans, and timely incorporate new technologies, new processes and new norms into the teaching standards and content. Explore the work experience of the apprenticeship system, and form the old leading the new, one-to-one pairing, hands on technology inheritance. Establish the Apprenticeship Management Committee to be fully responsible for the publicity, resource integration, work coordination, problem solving and other matters of the apprenticeship, and provide organizational guarantee for the efficient operation of the apprenticeship.

2.2. Organization and Implementation

Our school gives full play to the advantages of vocational education and talents to serve the regional economic development, takes "facing key fields, gathering superior resources, improving innovation ability, and promoting industrial development" as the guiding ideology, "taking service as the purpose, and employment as the guidance", and uses the way of school enterprise cooperation to support each other, use resources mutually, and complement each other's advantages, so as to jointly cultivate talents conforming to economic and social development.

Our vocational education should meet the needs of society, be in line with the market, cooperate with enterprises, cultivate talents for enterprises in a targeted way, and pay attention to the practicality and effectiveness of talents. The education method of "education background skills" is adopted. While carrying out quality education, students are also trained in skills. The education model of "five points theory and five points practice" is adopted. Students are the center and students are taught in accordance with their aptitude.

Make use of enterprise ideas, technological advantages, industry resources and universities to carry out the deep combination of "industry" and "education".

When schools, enterprises and students sign a tripartite agreement, students will have jobs when they enter the school, and jobs when they graduate. Realize the synchronization of enrollment and recruitment, teaching and production, practice and employment. The implementation of education is jointly completed by enterprises and schools. The content of training and examination comes from the needs of enterprises, and professional skills and practice courses are provided for enterprises. After completing their studies, students can enter the enterprises cooperated by the university for employment. According to the needs of the enterprise, the school regularly conducts special training and enterprise publicity for students, and provides alternative interns for enterprises. The enterprise arranges enterprise tutors to conduct skills training for students on time, provides opportunities for students to visit the enterprise and study, and regularly receives qualified students from training according to the source of students to work in the enterprise. After the training, the employee can take up the job according to the contract after passing the assessment organized by the company. In this way, students trained through school enterprise cooperation, multiple subjects and joint training have strong adaptability, high employment rate and good employment stability.

We will continue to deepen the breadth and breadth of school enterprise cooperation, carry out multi-level and multi-dimensional practical cooperation in talent recruitment, staff training, technology research and development, etc., and achieve cooperative education, joint training, coordinated development, mutual benefit and win-win results, so as to achieve more substantive cooperation results.

Focusing on the goal of training highly skilled talents with good professional ethics, strong professional skills and sustainable development ability to meet the needs of local social and economic development, and on the basis of learning from advanced vocational education concepts at home and abroad, combined with their own school running conditions and practice in recent years, we actively explored the course system of mechanical manufacturing specialty based on working process, Try hard to construct a new system of mechanical manufacturing courses in higher vocational colleges. It is to determine the teaching content, design the curriculum according to the relationship between activities and knowledge in the work process, and ensure that the constructed curriculum system meets the goal of higher vocational education, meets the needs of local social and economic development, and is reasonable and scientific.

3. Reform and Innovation

The basic vocational courses are constructed in two ways. One is to extract common knowledge and basic skills from machinery manufacturing enterprises and develop them into basic courses to cultivate students' basic professional abilities; The second is to consider the cognitive ability of students at different growth stages, develop step based basic courses, and ensure the implementation effect of systematic courses based on work process. Increase learning steps, reduce learning difficulty, improve students' interest, and achieve teaching objectives.

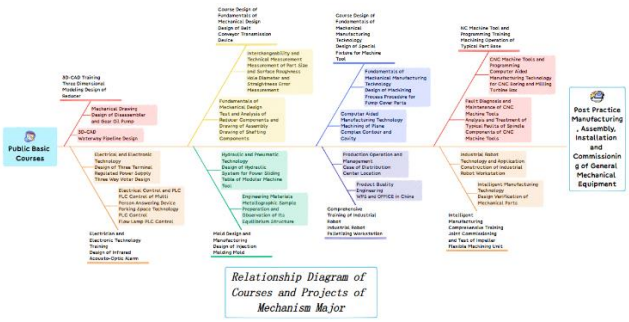


Figure 1. Atlas of Equipment Manufacturing Professional Curriculum System Based on Apprenticeship Talent Training Mode

In order to adapt to the requirements of small and medium-sized machinery manufacturing enterprises for the professional competitiveness of talents, courses in the field of learning are constructed with the "through process of mechanical product development, production and sales", typical mechanical products of small and medium-sized machinery enterprises are selected as the carrier for curriculum development, and the teaching implementation process is designed according to the action oriented teaching principles.

According to the development of the industry and the needs of enterprises, the school and enterprises jointly carry out cooperation in professional construction, curriculum construction, teaching resource library construction, etc., to cultivate high-quality technical and skilled talents in the field of equipment manufacturing.

Focusing on the development of students, the school implements the education mode of "collaborative education, work and study alternation, integration of theory and practice, and integration of learning and application", and implements the linkage of four paths of theoretical teaching, practical

teaching, extracurricular activities, and school enterprise cooperation to build a talent training system that meets the diverse needs of students' employment, continuous learning, and personalized development.

Hire industry experts as enterprise mentors, hold professional analysis meetings on mechanical manufacturing, analyze the working process of typical posts (groups), summarize the technical and operational capabilities that students need to master, sort out the knowledge points, skill points and quality points required by technical and operational capabilities, and jointly develop talent training programs, develop courses and textbooks, design and implement teaching, organize assessment and evaluation, carry out teaching research, etc. School teachers and enterprise teachers jointly undertake the teaching tasks of the apprenticeship system, forming a double tutor system.

The internship base has good internship conditions and management environment; it helps to solve the accommodation, labor protection, health and other conditions required by interns, and provides certain post and living subsidies for interns. Instructors (teachers) with corresponding professional and technical posts are selected to guide students, so that students can effectively participate in practical activities and successfully complete the teaching practice plan. The practice base of the Industrial Park is relatively stable, with students of fixed majors practicing every year. After students come to the base for practice, the leader of the practice base, the director of the practice workshop, the instructor, and the practice instructor form a practice guidance group to help the interns formulate practice plans, guide students in production practice, organize and manage the practice process, and be responsible for the identification of students' practice results. Both schools and enterprises further strengthen personnel exchanges, fully realize complementary advantages, constantly cooperate to open up new space for development, and explore the reform of talent training mode.

4. Summary

Implement the fundamental task of establishing morality and cultivating talents, deepen the integration of industry and education, school enterprise cooperation, improve the education mechanism of combining morality and technology, and promote the integration of work and learning, knowledge and practice; We will fully implement quality-oriented education, integrate the improvement of vocational skills with the cultivation of professionalism, and cultivate students' sense of social responsibility, innovation spirit, and practical ability. Efforts should be made to cultivate students' professionalism, professionalism and craftsmanship, and improve students' professional ethics, professional skills and employability and entrepreneurship. Guided by professional needs, focusing on the cultivation of practical ability, and taking the combination of production, learning, research and application as the approach, we should coordinate the dual educational resources of schools and enterprises, and strive to build a modern apprenticeship training system. Create an environment for the growth of technical and skilled personnel and unblock the channels for the growth of technical and skilled personnel. We will promote the high-quality development of vocational education, promote the transformation and upgrading of vocational education, improve the quality of vocational education, cultivate excellence, add value and enable it, and provide high-quality technical and skilled personnel needed for social development.

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