Research on the Model of Promoting the Training of Applied Talents in Mechanical Specialty by Cooperation between Government, School, Industry and Enterprise

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Abstract: "Four-party linkage": that is, the government, industry, enterprises and schools jointly participate in the reform of Vocational education, the government plays a leading role, industry plays a guiding role, vocational colleges as the main body of teaching reform, enterprises as the main force of teaching reform. Beihua University, on the basis of actively integrating the resources of "government, school, enterprise" and vigorously promoting the cooperation between schools and enterprises, attracts advanced educational ideas and high-quality educational resources, which not only helps to improve the comprehensive quality of students, but also helps to serve the local economy and cultivate highly skilled talents with an international perspective for the society. This paper introduces the exploration and practice of the mode of integration of government, government, enterprise and school, and summarizes the relevant experience and practice of this mode.

In November 2006, the Ministry of Education issued "Several Opinions on Improving the Teaching Quality of Higher Vocational Education in an All-round Way", which indicates that the development of Higher Vocational Education in China has entered a new stage. According to the Opinions, Higher Vocational Colleges "should actively promote the learning mode combined with productive labor and social practice, regard the integration of work and learning as an important starting point for the reform of personnel training mode in Higher Vocational education, promote specialty adjustment and construction, and guide the reform of curriculum, teaching content and teaching methods." In addition, the national medium and long-term education reform and development plan outline (2010-2020) also proposed to "service as the purpose, employment-oriented, promote education and teaching reform. We will implement the training mode of combining work with study, school-enterprise cooperation and on-the-job internship.

Through the interpretation of these opinions and policies of the relevant departments of the state and the current situation of the construction of practical teaching system in Institutions of higher learning, it can be concluded that the concept of "school-enterprise cooperation, work-study integration" is put forward in view of the development of the times and the demand of the employment market, emphasizing on improving students'practical ability, professional skills and employment competitiveness as the teaching focus and comprehensive learning. High-quality educational environment and teaching resources in enterprises and other fields should adopt practical teaching methods that combine theoretical knowledge with labor practice and school teaching with enterprise production to train applied talents needed by employing units.

Beihua University, as the first pilot University of applied transformation in Jilin Province, and Ningbo Shuanglin Group, has carried out in-depth exploration and Research on the mode of school-enterprise collaborative talent training. Through the research on the training mode of mechanical talents, innovative entrepreneurship education is permeated into the process of professional education, so that students theoretical knowledge and practical ability can be fully developed, students' innovative entrepreneurship ability can be effectively improved, teachers knowledge reserve and professional development can be expanded, and teachers' education and teaching level can be improved.

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1. Analysis of the Problems Existing in the Training of Mechanical Specialty Talents at the Present Stage

1.1. Construction of Practical Teaching Materials

At present, there is still a lack of practical teaching materials for mechanical specialty in Colleges and universities. The existing practical teaching materials are far behind the innovation and progress of global science and technology, and are not applicable to the actual production of machinery manufacturing enterprises. Most of the knowledge and skills learned in school practice teaching have no practical value and can not play a role in the actual mechanical manufacturing work.

1.2. Specific methods of practical teaching

At present, many colleges and universities have realized the importance of practical teaching, began to learn the teaching methods of western developed countries, and achieved some results. However, limited by many practical factors, many of these teaching methods can not be fully implemented and carried out. Due to the limitation of conditions or the neglect of practical teaching in some colleges and universities, many mechanical teachers still unilaterally adopt the traditional subject teaching mode and single teaching method, and students'professional practical skills can not be fully cultivated.

1.3. Guarantee of Practical Teaching Conditions

Due to the lack of teaching funds or the lack of awareness of the importance of practical teaching, most colleges and universities in China often lack the space, advanced equipment and teachers'resources to carry out practical teaching, which leads to the failure of many practical teaching links. Especially in mechanical specialty, the purchase of practical teaching equipment requires a lot of investment. Under the condition of serious lack of equipment and the necessity of offering courses, colleges and universities can only adopt the practice of increasing theoretical courses and reducing practical courses. After students receive such practical teaching training, due to the lack of practical operation opportunities, the actual professional skills can not be improved.

2. The Mode of Cooperative Training of Talents between Government, School, Government and Enterprise

"Government-school-enterprise" cooperation in cultivating talents refers to the construction and development of cooperative education model by governments, schools, industries, enterprises and other organizations, giving full play to their respective advantages and roles, rationally allocating resources, working together and in-depth integration, realizing the linkage development of personnel, information, capital, technology and other educational elements, so as to achieve the goal of common education.

2.1. Government-led

The government undoubtedly plays a leading role in the linkage between government, schools, enterprises and enterprises. The government plays a leading and promoting role in the linkage between government, schools, enterprises. The government should not only assume the responsibility of building a quadripartite interactive platform, but also formulate relevant policies to gradually promote and improve the linkage and cooperation mechanism.

2.2. Taking universities as the main body

As a platform for education implementation, colleges and universities are also the main part of the linkage link between government, schools, enterprises. Under the guidance and planning of the government, it formulates a talent training plan and implements specific teaching contents to serve the society; its specific responsibilities are to actively integrate the needs and resources of all parties, to carry out top-level design of the four-party linkage; to make full use of the advantages of the

four-party linkage resources, to carry out teaching practice, technological research and development and teacher training activities.

2.3. Guided by Industry Standards

Industry standard is the general term of professional standard and technical standard. It provides reference and amendment suggestions for the construction direction and specialty setting of the linkage education mode of "government, school, enterprise". Industry associations are the links between education and industry. They also fulfill the responsibilities of Vocational education, participate in and cooperate with various educational links in Colleges and universities, and actively play the role of industry demand reference and guidance.

2.4. Participation based on the needs of enterprises

Enterprise is the biggest carrier of the linkage between government, school and enterprise. It tries and participates in all aspects of education and teaching in Colleges and universities in an all-round way. Enterprises effectively integrate their own talent needs, technical needs, business tackling and other key issues into education and teaching cooperation, on the one hand, to achieve the purpose of directional training of talents for enterprises by utilizing University resources; on the other hand, through the transformation and application of scientific research results, timely revise and optimize the school's talent training program and mode.

3. The Significance of Cooperative Training of Talents between Government, School, Government and Enterprise

3.1. School-enterprise cooperation has strengthened the construction of teaching staff

Through school-enterprise cooperation, we should introduce enterprise technical experts and backbone to enrich part-time teachers, and guide young and middle-aged teachers to participate in enterprise practice and various kinds of advanced studies, so as to improve their educational level and technical application ability. A team of teachers with reasonable number, professional title, academic degree and age structure, combination of specialized and part-time schools, excellent teaching level, strong scientific research ability, good collaborative spirit and "double-qualified" quality has been formed.

3.2. Integration of production and education strengthens the construction of practical teaching conditions.

Through school-enterprise cooperation, the practice base of deep integration has been established in the cooperation units of Jilin Jiangbei Machinery Group and Ningbo Shuanglin Group. Students can use their knowledge to solve practical problems under production conditions. In the construction of school practice base, referring to the actual production requirements of enterprises, a comprehensive practice teaching base with functions of teaching, innovative practice, training, production and manufacturing, technology development has been built. The construction of software and hardware of the school practice teaching base is carried out with the deep participation of enterprises, from base planning to equipment procurement and installation, from practice project development to practice management system formulation, practice effect evaluation, etc. The practice teaching mode of "integration of production and education" is constructed, and the long-term operation mechanism of win-win cooperation is explored.

3.3. Close integration of schools and enterprises, strengthening scientific research and technology

Scientific research is the extension of teaching and teaching is the accumulation of scientific research. While doing a good job in teaching, we should actively provide technical services within our capabilities for industrial enterprises. By cooperating with enterprises and adopting the project combination method, a cross-unit and cross-disciplinary team of scientific and Technological Development and technical service has been set up, which organically combines the engineering

experience of enterprise personnel with the new technology of University teachers. The achievements of scientific research are widely used in teaching, effectively mobilizing students'learning enthusiasm, stimulating their interest in innovation and entrepreneurship, and creating a good learning and research environment.

4. Conclusion

Through continuous exploration, the training methods of integration of industry and education and integration of work and study in mechanical specialty are playing an increasingly effective role. Through the edification of enterprise culture and the exercise of practical projects, the students'ability to analyze and solve problems has been greatly improved. The construction of the training system for mechanical professionals in Institutions of higher learning should start from many aspects. It can not be completed overnight. It requires educators to explore and try constantly. Only by constantly promoting and deepening the reform of the teaching system, can the students trained in this major better adapt to the needs of employers, improve the employment rate, and guide more high-quality students to apply for this major. Finally, a virtuous circle will be formed, which will lead the mechanical specialty of colleges and universities to a higher level of development.

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