

Practice and Exploration of a New Mode of College-enterprise Cooperative Talent Training under the Background of New Engineering

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Abstract

Under the background of new engineering, the innovation of school enterprise cooperation model is an important direction of higher education reform and development. This paper innovates the talent training mode of colleges and universities through the joint R&D center of colleges and enterprises, changes the traditional closed school running mode of colleges and universities through practical exploration, constructs and improves the innovative result in the combination of work and study in the cooperation between colleges and enterprises, realizes the deep integration of college construction, enterprise development and industrial technology needs, and helps to give full play to the economic value and social benefits of educational resources.

Keywords

New Engineering; College-enterprise Cooperation; Combination of Work and Study; Talent Training Mode.

1. Introduction

In response to the new scientific and technological revolution and industrial transformation in the new era, the Ministry of Education actively promotes the reform of new engineering based on the needs of new economic development. It is required that the development of "new engineering" under the new situation must clarify the industrial needs, lead the reform direction with needs, break through the thinking mode of traditional engineering, encourage vocational colleges and enterprises to strengthen cooperation and implement various forms of joint education. All-round and in-depth school enterprise cooperation can enable colleges and universities to truly understand the actual requirements of enterprises, cultivate innovative talents can truly meet the needs of industrial development and employers, and promote the comprehensive and coordinated development of higher education. At present, most school enterprise cooperation is characterized by insufficient cooperation depth, become a mere formality and lack of communication. Due to the lack of effective school enterprise cooperation and communication mechanism, the separation between teaching and application is still serious, which is difficult to take full advantages of enterprises and universities. Hebei photovoltaic module manufacturing equipment technology innovation center is jointly constructed by Hebei Normal University of science and technology, Qinhuangdao Boostsolar Photoelectric Equipment Co., Ltd. and Qinhuangdao Xinyu mechanical equipment Co., Ltd. A

long-term effective cooperation and communication mechanism shall be established between the University and the co-construction unit. With the project construction as the carrier, during the construction period of the innovation center, both parties shall establish a mechanism for talent exchange and training, provide technical training to the personnel of the technology innovation center from time to time, and jointly take charge of talent training and introduction to improve the quality of talents. The supporting unit and the co-construction unit share the resources of the technological innovation center, and also jointly undertake the construction and maintenance of the technological innovation center. Both parties share responsibilities and rights and are jointly responsible for the technological innovation center.

Based on China's national conditions, regional economic and social development and the current situation of practical education in Colleges and universities, relying on the school enterprise joint technological innovation center, this paper explores a multi-channel, multi-level and multi-mode comprehensive training system of school enterprise cooperation and work study combination, and comprehensively improves students' knowledge system, practical ability and quality structure with the combination of theory and practice, Provide reference ideas for the further promotion of school enterprise cooperation in higher education.

2. Explore a New Talent Training Mode of School Enterprise Cooperation under the Background of New Engineering

2.1. To Build a New Model of School-enterprise Cooperation in Personnel Training

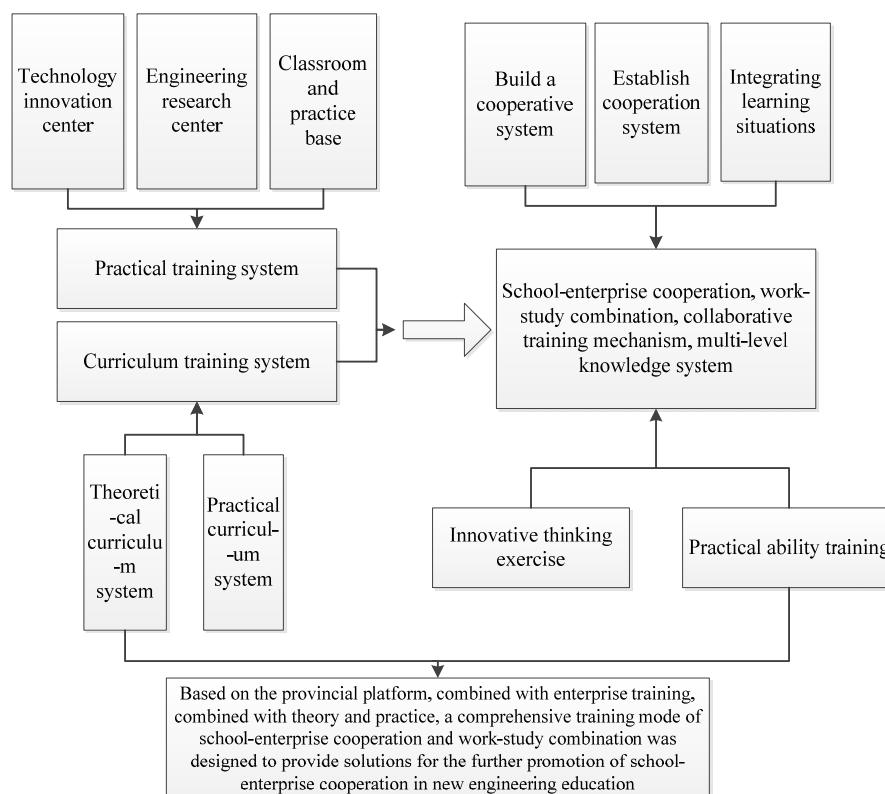


Fig 1. New mode of talent training in School-enterprise cooperation

The development of enterprises needs the support of talents. Effective School-enterprise cooperation can deliver a large number of high-level technical and skilled talents and the latest technical research results to the region, improve the overall quality of regional talents and promote the rapid development of regional economy. In this paper, relying on the platform

advantage of Hebei Normal University of Science and Technology, we implement an open, mobile and joint talent training mechanism. The demand for R&D and innovation comes from industrial development and technological progress. Based on the co-construction of the innovation center, we work together and cooperate deeply to complete the process of technology research and development and achievement transformation, and promote the reform of university talent training system on the basis of solving practical industrial technical problems.

As shown in Figure 1, the new mode of talent training in School-enterprise cooperation applies provincial platform resources such as technology innovation center and engineering research center to practical teaching base by means of work-study combination and School-enterprise cooperation, and studies the problems existing in School-enterprise cooperation. Make full use of the educational resources of enterprises and industries, and organically combine classroom education with the production environment, so that students can acquire knowledge in extensive exchanges with enterprises and society, learn and apply knowledge in practice, improve their innovation ability in project development, and get the most effective exercise in the real productive training environment.

2.2. Specific Implementation of the New Mode of Talent Training

Establish a long-term and in-depth cooperation and exchange mechanism, take the project construction as the carrier, establish a talent exchange and training mechanism during the construction period of the innovation center, carry out technical training for the personnel of the technological innovation center from time to time, jointly take charge of talent training and introduction, and improve talent quality. The relying unit and the co construction unit share the resources of the technological innovation center, and also jointly undertake the construction and maintenance of the technological innovation center. Both parties share responsibilities and rights and are jointly responsible for the technological innovation center.

(1) Establish an effective mechanism of School-enterprise cooperation and communication, base on the joint construction of provincial R&D centers, base on the joint training of practical teaching bases and enterprises, and combine theory with practice, and design a multi-channel, multi-level and multi-mode comprehensive training mode of students' knowledge system, practical ability and quality structure, so as to provide solutions for the further promotion of School-enterprise cooperation in new engineering education.

(2) Study the technical development law and industrial development characteristics of photovoltaic module packaging industry, and explore the training needs of engineering talents in the new era; Research on the talent training mode of production-teaching integration of new engineering, hire engineers with rich engineering experience to guide students, and explore the industry-oriented talent training mechanism.

(3) With the product life cycle of "conception-design-transformation-application" as the carrier, the teaching chain from theoretical study, practical innovation, transformation and application to inquiry learning should be established, and innovative ideas should run through the whole process of practical teaching, and an innovative practical curriculum system based on knowledge application should be developed, so as to build and improve the position of training bases inside and outside the school in the teaching of work-study combination, so as to continuously cultivate practical ability.

3. Advantages of the New Mode of Talent Training

This deeply integrated school running mode and talent training system solves the current educational situation of decoupling theory from practical application in traditional teaching, integrates the technology and talent resources of colleges and universities into social and

economic development, and greatly gives play to the economic value and social benefits of educational resources. It is another driving force of economic construction in the new era.

(1) The traditional closed school-running mode has been changed, and the School-enterprise joint open school-running mode is connected with social economy, integrated with enterprise units, and combined with enterprise staff training, thus forming a set of School-enterprise cooperation sustainable development mechanism which is not only suitable for the training of engineering professionals, but also conducive to the innovative development of enterprises.

(2) Integration of theory and practice. Through the combination of work and study and school-enterprise cooperation, classroom education and production are organically combined, so that students can obtain knowledge in extensive communication with enterprises, improve their ability in research and development, and get the most effective exercise in real productive innovation practice.

(3) According to the demand of industrial technology and the trend of industrial development, promote the integration of industry technology, engineering experience and education and teaching, deeply reform the present situation of pure theoretical teaching, face the practical engineering application, and combine learning and application deeply through group collaboration and cooperative learning, so as to make them complement each other, and construct an innovative engineering education mode combining work and study.

4. Conclusion

In this paper, by investigating the present situation of talent training in School-enterprise cooperation, carefully analyzing the existing problems and reasons, drawing lessons from the advanced experience at home and abroad, according to China's national conditions, the innovative development needs of enterprises and the reality of new engineering education, formulating a talent training plan of "work-study combination", developing an innovative training system based on innovative application process, constructing and perfecting the position of training bases inside and outside schools in work-study combination teaching, and combining classroom with production, so that students can improve their abilities in project development and get effective training in innovative practice.

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