Research on Multidimensional Talent Training Model of Applied Undergraduate Colleges under the Background of Professional Certification

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Abstract. Based on the background of professional certification, this paper puts forward the multi-dimensional model of personnel training, that is, the school imparting knowledge, enterprise hammering skills, and social shaping character. Take the demand of regional economic development as the guide, revise the training programs, perfect the curriculum system, speed up the construction of the teaching staff, and innovate the teaching methods. Build a multi-subject collaborative talent training practice platform to improve students engineering practice ability.

Introduction

The 19th CPC national congress report point out that building an educational powerhouse is the basic project for the great rejuvenation of the Chinese nation. General Secretary Xi Jinping systematically expounds the basic strategy of adhering to and developing socialism with Chinese characteristics in the new era from 14 aspects, and puts forward new requirements for the development of higher education. Xi Jinping also stresses that innovation is the first driving force to lead development, is the strategic support for the construction of a modern economic system. Since 2000, the socialist higher education with Chinese characteristics has made remarkable achievements and entered a new era, and the economy has changed from rapid development to high quality development, and scientific and technological innovation has continuously broken through the boundaries of the inherent knowledge system. Facing the new technology, newly new industry, new mode, higher education personnel training in the new era is facing unprecedented opportunities and challenges.

According to the Regulations of the National Committee of Experts on Engineering Education Professional Certification, the goal of carrying out engineering education professional certification in China is to construct the quality monitoring system of Engineering Education in China, promote the reform of Engineering Education in China and further improve the quality of Engineering education. Establish the professional accreditation system of engineering education which links up with the registered engineer system, construct the connection mechanism between engineering education and business circles, and enhance the adaptability of engineering education personnel training to industrial development.

The core idea of Engineering Education Professional Certification [1,2] is that is that through certification universities can make students of various engineering majors get international recognition, carry out transnational migration and integrate with the world. Engineering education professional certification standards pay more attention to students’ ability to find and solve problems, and emphasize the cultivation of students sense of innovation. Around such a talent training goal, multi-dimensional collaborative education model can be the greatest degree of clear market demand, can realize the training model of school imparting knowledge, enterprise hammering skills, social shaping character.
Talents Training Model to Meet Regional Economic Demand

The 19th CPC national congress report put forward the "implementation of regional coordinated development strategy", "deepening reform to accelerate the revitalization of the old industrial base in the northeast", This puts forward the educational aim and development direction of serving regional economy for local applied universities. Local colleges and universities should provide human resources guarantee for regional enterprises, technological innovation guarantee, and play an important supporting role in regional economic development and industrial transformation and upgrading.

Analyze the development trend of regional economy, grasp the demand of talents in the industry, fully integrate local resources, highlight advantages, condense characteristics, deepen the integration of production and education, school-Enterprise cooperation and other multi-party cooperative education model. Cultivate a large number of strong industry background knowledge, engineering practice ability, competent for the development needs of the industry application-oriented and technical skilled personnel. To achieve the purposeful training of schools, students choose more employment, the growths of local enterprises have self-confidence, regional economic development has a strength.

Engineering education professional certification provides a reference for enterprises to measure talents. Accredited schools and majors have training programs that meet the needs of society, so that the talents trained by such schools can meet the needs of social development.

The Construction of Multi-agent Collaborative Talent Training Practice Platform

Engineering talent is the direct participant, builder and must be the witness of "made in China 2025 ". The cultivation of high level engineering talents is the most direct and powerful guarantee to realize the strategic goal of manufacturing powerhouse. The engineering education professional certification is a new concept of innovative, integrated and full-cycle engineering education for the training of traditional engineering talents. Local colleges and universities should closely combine market demand and define the orientation of university construction under the background of Engineering Education Professional certification. Build a practice platform [3], combine theory with practice, stimulate interest in learning, and constantly improve innovation ability. Practice can close the distance between campus and society, study and employment, and cultivate socialist builders with strong sense of responsibility and mission.

The direction of talent cultivation in local colleges and universities is applied and the path is in practice. Building a practice platform can change the original teaching mode of "giving priority to classroom teaching, supplemented by experimental teaching", and establish a new teaching mode in which experimental teaching plays an important role. Develop open laboratory projects, guide students to enter the laboratory, truly participate in the experiment by themselves, think about the experiment and then design the experiment. Create conditions for students to enter the enterprise, zero distance contact with the enterprise, and lay a good foundation for students to better adapt to the enterprise after graduation. Establish quality innovation system, organize and encourage students to participate in scientific and technological activities, and constantly improve their innovation ability.

Closely following the favorable policies of the "one belt and one way" construction, and building a practical platform of multi agent collaboration, we can maximize the sharing of resources, deepen the integration of production and education, and learn to develop by leveraging. The concept of engineering education professional certification encourages learning from advanced international education concepts and experiences, and carries out a variety of technical and personnel exchanges and cooperation from various channels and perspectives.
Innovating and Perfecting the Teaching System, Curriculum System and Teaching Content

Profound changes are taking place in the economy and education of the new era. International competition is becoming more and more fierce, and all countries are grabbing the commanding heights of talent. If the mechanism and system of personnel training cannot achieve self-renewal and self-transformation, it will not be able to keep up with the pace of social development and it will not participate in competition.

Universities and enterprises, universities and society, is no longer the simple relationship between the upstream and downstream of human resources. Institutions of higher learning should closely integrate new technological changes, new industrial trends and new market demands, regard enterprises, society and students as equal subjects, and teach students in accordance with their aptitude and needs. With enterprises as partners, society as backing, student-centered, innovative teaching system, perfect curriculum system, expand teaching content, and form a dynamic adjustment mechanism to meet the needs of talent training in the new era [4].

Under the background of engineering education professional certification, vocational certification is introduced into the classroom, and the theoretical knowledge points and engineering application abilities of each course are defined, and the teaching content and knowledge ability objectives are defined. At the same time, the use of the Internet for "mixed teaching", "MOOC teaching" and "smart classroom" and other new teaching methods can promote the effective supply of high-quality teaching resources, improve the efficiency of the supply of teaching resources, promote the transformation of teachers’ roles and functions, and promote the construction of teaching teams.

Completion of the Upgrading of Teaching Quality in New Era Education in Applied Colleges and Universities

Under the background of engineering education professional certification, the cultivation of talents cannot be separated from innovative and high-level teachers. Under the mode of "deep integration of production, teaching and research", university teachers should be the leader in the mission of speeding up the construction of an innovative country, is called: Iron also need its own hard. Combining with new technology, new industry and reforming the training of innovative talents, the construction of university's own contingent should also be at the forefront of the times. Teachers in Colleges and universities are constantly exploring new technologies, innovating new teaching methods, and applying traditional ideas and systems to teaching in a way that is more suitable for the values of the new era [5].

Colleges and universities are different from research institutes. Colleges and universities should conduct scientific research as well as teach and educate people. College teachers should pay equal attention to both scientific research and teaching. Without scientific research, teaching will lack depth. Without teaching, scientific research will lose its meaning. At the same time of scientific research and innovation, we should intensify teaching innovation and actively investigate and study advanced teaching methods at home and abroad.

We should actively seek School-School cooperation, school-enterprise cooperation, open up the second classroom, and form an atmosphere of "educating people for a hundred years, quality first" in the whole school. We should take the professional certification of engineering education as an opportunity to improve the quality of education and teaching in an all-round way.

Summary

This paper proposes a multi-dimensional education model under the background of engineering education professional certification. Guided by the needs of regional economic development, we should clarify the objectives of personnel training, innovate and improve the teaching system, curriculum system and teaching content. Strengthen innovative and high-level teachers and complete the upgrading of education and teaching quality in the new era of applied universities. Seek to build a
multi-agent collaborative practical training platform for applied talents. Explore and innovate the mechanism of multi-subject cooperative sports, promote the integration of science and education, production and learning, school-enterprise cooperation, and effectively improve the competitiveness of students.

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References


