Research on the Training Mode of Engineering Master Students Based on Innovation and Entrepreneurship

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Abstract. In the "public innovation, the business background, colleges and universities as the training base of innovative talents, the main task of higher education is to cultivate the talents who can adapt to the development of economy and society, and lead the development of economy and society, innovation and entrepreneurship is the leading role of the main performance. This paper from the teaching concept, training objectives, teaching methods, discusses the training mode of "double master" project.

Introduction

The decision made by the CPC Central Committee and the State Council to build an innovative country is a major strategic decision related to the overall situation of socialist modernization. Colleges and universities are the base of cultivating innovative talents, The main task of higher education is to cultivate the ability to adapt to economic and social development, but also to lead the economic and social development of high-quality talent, innovation and entrepreneurship is the leading role of the main performance. With the development of economy and society, the relationship between higher education and economic society is more and more close, colleges and universities to meet the needs of economic and social development, on the one hand, through the dissemination of knowledge, dissemination of science and technology, dissemination of culture, training talents to meet the needs of economic and social development, on the other hand, schools need to create knowledge and create technology, based on their own, efforts to stand in the forefront of science and technology, and constantly to the community of new knowledge, new achievements, At the same time, we can cultivate the innovative and entrepreneurial talents who can lead the economic society.

Both innovation and entrepreneurship is the need for self-development. Development needs is the highest level of needs, is to give full play to their talents, the desire and pursuit of self realization, to meet the needs of labor, learning, creativity and so on. At present, the international and domestic situation is undergoing profound changes, engineering graduate students are facing unprecedented opportunities and challenges, as a successor to the motherland, they are eager to develop themselves and improve themselves, therefore, the development of the main characteristics of innovation and entrepreneurship as the main needs of engineering graduate students.

The Transformation of Education Ideas, Innovation and Entrepreneurship to Achieve the Integration of Education

Innovation and entrepreneurship is a dialectical unity. Innovation is a process from the emergence of new ideas to the discovery, invention and design of new knowledge, new technology, new products or services. Entrepreneurship is a process of discovering and capturing opportunities and thus creating new products or services and realizing their potential value. Innovation pays attention to the value discovery, the enterprise pays attention to the value realization. There is an inevitable link between entrepreneurship and innovation, innovation is the premise and basis of entrepreneurial activities, it is the most essential factor and the most essential characteristic of entrepreneurial activities, is the soul of entrepreneurship and the key, but also to ensure the sustainability of entrepreneurship. But innovation does not necessarily lead to entrepreneurial activities, entrepreneurship is not equal to
innovation. There are many kinds of innovation activities, not all of them are suitable for entrepreneurial activities, not all suitable for entrepreneurial innovation will be transformed into entrepreneurial activities, entrepreneurship requires high potential innovation. Entrepreneurial activities are also diverse, including innovative entrepreneurship, imitation of entrepreneurship, copying entrepreneurial. Any innovation is not based on entrepreneurship, are not in the true sense of entrepreneurship. So, based on entrepreneurial innovation, promote innovation and entrepreneurship. Master of engineering education should cultivate financial innovation and entrepreneurship as one of the "double type" talents.

Optimize the Training Objectives, Clear the Goal of Innovative Talents

The goal has a great guiding effect on the growth of students, career planning is the starting point for students to grow, become successful. By determining the main content and implementation of student career planning, in the process of personnel training, to guide students' value orientation, behavior standards, ideology, learning norms and learning motivation. Help students to establish the ideal and career development goals, learn to choose and plan, and guide students to achieve their career ideals step by step.

The objective characteristics of innovative talents are based on the general characteristics of innovative talents. The talents of innovation and entrepreneurship should have a solid foundation of knowledge and a more complete knowledge structure; Have a good ability to learn and learn independently; with the typical sense of innovation and entrepreneurship and firm and indomitable spirit, will; have a keen insight, unique way of thinking, good judgment and grasp the opportunity; excellent ability of innovation, practice, implementation and development; Good team spirit, cooperation ability and social competitiveness.

Optimize the Training Mode, Establish the Mechanism of Innovation and Entrepreneurship Training

Personnel training mode is a relatively stable teaching content and curriculum system, and it matches the scientific teaching methods, methods and means to achieve the training objectives and specifications of the education process and methods. Innovative talents need extensive knowledge, good knowledge structure, solid knowledge foundation, there is a need for a variety of ways to stimulate interest in learning according to personal interests, close or zero distance contact with social life.

First, according to the needs of the development of market economy, In particular, the local economic and social development of the diverse, multi-level talent needs, as well as the differences in the personality of students and the different needs of education, and actively explore a variety of personnel training model.

The second is to strengthen the students' autonomous learning mechanism and self-development mechanism. Respect students' choices, interests and hobbies, and expand their learning autonomy, cultivating students' autonomous learning awareness and autonomous learning ability, planning their own learning plan, further improve the flexibility of the school system, the flow of training, hierarchical teaching, expanding the students to choose their own professional, independent selection of instructors, independent selection of curriculum space.

Innovative Teaching Methods, to Improve the Teacher Led, Student Oriented Education and Teaching Model

The first is to emphasize the advance of teaching content, novelty. Cultivating students' creative ability, must constantly update teaching content, let the students master the latest knowledge, learn about the latest developments in the world, so that the level of knowledge and structure of students and the world's advanced level of development tend to synchronize, in this way, students can be
achieved on the basis of the existing level of innovation and breakthroughs. This requires more scientific research to promote teaching efforts, more scientific research results into the teaching content of the course, applied to teaching practice.

Secondly, it emphasizes the training of students' problem consciousness and thinking ability. Knowledge is very complicated, difficult to pass directly to others. To a large extent, knowledge is constructed by the cognitive subject, and its construction process is a meaningful learning process. Therefore, in the teaching process, it is very important to develop students' initiative, and the learning process is more important than the results of the study. Knowledge is social, it is embedded in the team or community, and more use of cooperation and dialogue is more conducive to the improvement of teaching. Therefore, we must abandon the traditional teaching mode, only to adapt to the knowledge of the curriculum teaching methods, actively promote the problem based teaching method, explore the teaching method, The teacher led classroom becomes a place for teachers and students to explore together, teachers as facilitator, students learn cooperation, focusing on the forming process of knowledge, train students' independent thinking ability, activate students' creative thinking, strengthen the training of modern economic norms, strengthen the training of students' problem consciousness and innovation ability.

Thirdly, it emphasizes the connection between theory and Practice. Knowledge is closely connected with the context of situation, in the process of knowledge learning, we should pay attention to the real world, Emphasis is placed on knowledge in the context of the real world where it occurs and applies. Therefore, in the development of the theory of teaching at the same time, actively carry out curriculum practice. Discuss a series of practical cases by organizing students, Propose a solution to the problem, to enable students to master the relevant professional skills, knowledge and theory, the second is to use the simulation teaching method, the use of simulators or simulated situations to enable students to play a role in close proximity to reality, and interact with people or things in order to achieve the desired learning objectives, In order to cultivate students' ability of information acquisition, motor skills and decision making, three is to popularize the "actual combat" teaching method, in a real social environment and working environment, enable students to play a real role in reality, to carry out business activities to achieve the real purpose of learning, including curriculum design, curriculum research, curriculum practice, curriculum practice.

Strengthen the Practice Education, and Set Up the Practice Teaching Mode Which Integrates the Internal and External Practice

Practice education is not only a teaching method, but also a teaching link. Taking the vocational skill training as the main content, taking the practice innovation ability training as the goal, the main teaching method is to use the guidance of teachers and students' active participation, It is an important channel for students to transform knowledge into ability and apply theory to practice. Therefore, strengthening the practice of education, is an important part in cultivating students' management ability.

On the basis of inheriting the traditional content, through the integration of the original practice, to realize the whole optimization of practice teaching content system, establish the curriculum practice, the investigation practice, the thesis design and the extracurricular practice four aspects as the key point, take the public practice, the discipline practice, the specialized practice, the comprehensive practice four layer by layer progressive ladder as the level, Adhere to the practice of teaching four years line, the practice teaching runs through the practice teaching system of the whole learning process. This system has two basic characteristics: one is to carry out the system of practical teaching, the two is the practice of teaching into the overall training program, and accounting for a larger share of learning.

Strengthen the scientific research training with graduation thesis as the core content. Graduation thesis is an important link to cultivate students' practical ability and innovation ability. In order to ensure and improve the quality of undergraduate thesis, strict reporting and examination system, clear
requirements of topics closely combined with the guidance of the teacher's scientific research, production practice, social work, etc., at the same time to improve the graduation thesis update rate, to ensure the advanced nature of the problem, novelty.

Lead the society into the school, strengthen the construction of the campus practice base. In the school set up an integrated, comprehensive, design of practical teaching platform and students in the practice of innovation and entrepreneurship practice base, So that students can not go to school in a simulation environment, to carry out simulation practice teaching activities. In addition to investment, and constantly improve and perfect the hardware conditions of the school practice teaching base, we should give full play to the advantages of teaching content, teaching methods, teaching methods, etc., practice and reform of teaching practice, focus on Strengthening Students' practical ability and innovation ability. Create and simulate the situation at work, guide students to participate in the design of teaching content, in practice, we should pay attention to the students' learning subjectivity and strengthen the students' innovative design ability training.

Push students out of school, and strengthen social work, production, scientific research. Strengthen the cooperation between colleges and enterprises and open up a new mode of school enterprise cooperation, make students in a real environment, to play a real role and to carry out the real teaching activities, according to the practice of students' practice, employment and entrepreneurship, to establish a strategic cooperative relationship with enterprises, especially private enterprises, gradually expand the strength and depth of cooperation, to create more opportunities for students to work with the actual social work, production, scientific research.

**Strengthen the Second Classroom, to Establish a "Second Channel Double Cultivation of Talents"**

The "second classroom" highlights its advantages with the flexibility of teaching organization, the openness of management, the universality of resource integration and the autonomy of resource allocation. It is an effective way and carrier of innovation and Entrepreneurship Education. The "second class" is limited by time and space, and more attention is paid to practice and Application. Students in practice, the composition of the team and the ability of the training process of interdisciplinary, cross-disciplinary, cross-knowledge, infiltration complementary, comprehensive, During the operation, a division of labor, cooperation, complement each other, complementary capabilities, highlight the team spirit, and the society is more closely linked to help students to improve the degree of socialization, for students to provide free thinking space, to create a special cultural environment to achieve the function of "environmental education", achieve the purpose and effect of "the first class". The purpose and effect of this kind of education will influence students imperceptibly, and gradually internalized into the quality of students, enhance students' desire for knowledge, Stimulate students' awareness of innovation and entrepreneurship, improve students' ability of innovation and Entrepreneurship.

Carry out innovation and Entrepreneurship Forum activities to stimulate innovation and entrepreneurial awareness and entrepreneurial impulse. Schools should make full use of educational resources at home and abroad, for students to organize high-quality "innovation and entrepreneurship report", "innovation and Entrepreneurship Forum", "entrepreneur class" and "successful alumni entrepreneurship report" and other activities, With experts, professors, entrepreneurs rich knowledge and unique insights and successful entrepreneurial process, encourage students to encourage students to enhance their confidence and determination to start a business.

In order to cultivate students' spirit of independent innovation, Fully mobilize the enthusiasm of students, strong academic atmosphere, the school should establish the management system of scientific research, increase funding to encourage students to carry out scientific research, published high-quality academic papers, Encourage teachers to participate in undergraduate research, to provide students with more academic lectures, academic opportunities, focus on supporting the construction
of academic societies, making full use of the advantages of faculties to develop academic societies, actively encourage students to conduct academic student publications.

With the subject competition as the carrier, and strive to promote the undergraduate science and technology competition, to create a more diverse innovation and entrepreneurship education space. Actively organize students to carry out a variety of extra-curricular science and technology competition, encourage students to practice, and actively participate in the design competition, to enable students to participate in research, production and other practical work, Increase the opportunity to cultivate practical ability and innovative spirit. At the same time, taking the undergraduate electronic contest as the carrier, combining with the students’ community activities to carry out the business competition, and to simulate the entrepreneurial practice, Focus on the students' entrepreneurial achievements, scientific evaluation of students’ entrepreneurial ability, Actively help students attract venture capital, timely launch of a more mature entrepreneurial team and entrepreneurial projects, students from the school to complete the smooth transition of society.

Actively carry out the practice of entrepreneurship activities in order to cultivate entrepreneurial practice ability. Integrating the teaching resources in the campus, opening up the open laboratory or innovation laboratory for students’ innovation and entrepreneurship, Around the students entrepreneurship content and projects, fully tap and open up the market, Market-oriented operation of social activities and the operation of the project social practice, undergraduate students and other activities, as a carrier of undergraduate Entrepreneurship.

Summary
In summary, colleges and universities in innovation and entrepreneurship under the background of education reform has a long way to go, it is necessary to carry out the reform of the corresponding training mechanism, teaching mode, evaluation mechanism and other aspects.

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