THE RESEARCH ON TALENT TRAINING MODE IN LOCAL ENGINEERING COLLEGES UNDER THE BACKGROUND OF INNOVATION AND ENTREPRENEURSHIP

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ABSTRACT

In the face of Severe market competition, innovation and entrepreneurship education is an important means for China to become a world power. Deepening the innovation and entrepreneurship education in Colleges and universities is the key factor in building an innovative country. This paper took local engineering colleges as research sites, in combination with local economic forms, taking curriculum reform and talent training program as the path, guided by the training mechanism of innovative talents, the aim is to train advanced talents with innovative engineering talents, achievements transformation and entrepreneurship, and serve local economy, integrating the idea of innovation and entrepreneurship education into the undergraduate training program, integrating innovation and entrepreneurship education into specialized courses and professional practice teaching, positive exploration provides a new research angle and inspiration for innovation and entrepreneurship education reform and development in universities.

KEYWORDS

innovation and entrepreneurship, personnel training, engineering colleges, higher education.

1. INTRODUCTION

In recent years, the cultivation of College Students' innovative ability is an important measure for our country's higher education to face the current society, face the market economy and alleviate the employment pressure. The party and the country attaches great importance to students' innovation and entrepreneurship education problems. In 2015, the general office of the State Council issued on deepening the reform of higher education implementation opinions a researcher pointed out the innovation and entrepreneurship education in universities has achieved positive results in recent years, the Ministry of Education and other departments have started the innovation and entrepreneurship program training on college students, talent cultivation model innovation pilot zone of college students and other construction projects [1]. In order to promote the cultivation of innovative ideas, entrepreneurship and management talents. Therefore, we are based on the advantages of engineering disciplines and cross disciplinary resources, with the curriculum reform and the reform of personnel training programs for the path, guided by the training mechanism of innovative talents, the cultivation of innovative engineering talent, achievements and entrepreneurship, serving the local economy as the goal of high-end talent. We should blend the concept of innovation and entrepreneurship education into undergraduate training program, integrate innovation and entrepreneurship education into specialized courses and professional practice teaching, strengthen the professional education and the integration of innovation and entrepreneurship education to construct a new system of the engineering and humanities disciplines, theory and practice combination, combining professional education and innovation education. It can promote college students' innovative practice ability, employment competitiveness and sustainable development potential.

2. INNOVATION AND ENTREPRENEURSHIP EDUCATION COMBINED WITH PROFESSIONAL EDUCATION

2.1 Building multiple integrated personnel training system

Through teaching verification, the training of innovative talents in engineering has the following rules: the first is to strengthen the cross-disciplines. We should achieve the combination of learning and research, combining production with learning, adjust the knowledge structure of students, strengthen the cross-disciplines in computer, humanities, information and so on. We need widen the specialty coverage to enhance development potential. The second is to strengthen innovation and entrepreneurship education. We need corporate the content of innovation and entrepreneurship in the content of teaching, combine with the computer, e-commerce platform and other key issues of practice, foster students' R & D practice, technical transformation and entrepreneurial management capabilities. The third is to strengthen practical operation ability. Establishing a number of cooperative bases for production and study, and strengthening the construction of practical teaching links at the same time. Improving the practical education system and methods to adapt to the growth of innovative and entrepreneurial talents gradually, and strengthening the cultivation of students' practical ability. For this purpose, we are based on the principles of interdisciplinary, co-construction and sharing, classified cultivation, and cut-through between production and learning to adjust teaching, scientific research, integrate social resources, optimize the course content further, establish personnel training system which combine professional training with innovation and entrepreneurship education, knowledge transfer with ability cultivation, teaching with research to foster high level talents with capacities of research and application, development and management, entrepreneurship and management.

2.2 Innovation and entrepreneurship education need run through the whole education procedure

When students enter into universities, they attend innovation and practice, which is an effective way to improve the students' practical innovation ability. Therefore, the idea of innovation and entrepreneurship needs to go through the university practice education. First-year students learn about professional and knowledge structures through the introduction of majors and disciplines. At the same time, students learn about the process of engineering practice, research and development and

operation management through the internal and external cognition practice, and stimulate students' interest in engineering majors. In the sophomore year, students began to carry out comprehensive experiments according to the major, and cultivated students' ability to apply cross-disciplinary knowledge, techniques and methods, and to analyze and solve practical problems. The junior students start training at the campus training base, enlighten students' innovative thinking and improve their ability to solve problems comprehensively. Senior year began to train at outside training base, strengthening and integrating scientific research, practice, improve students' practical innovation and social adaptation ability, teamwork and entrepreneurial spirit, strengthen the cultivation of innovation ability step by step.

3. DEPTH INTEGRATION OF INNOVATIVE ENTREPRENEURSHIP EDUCATION AND PROFESSIONAL COURSES TEACHING CONTENT

3.1 Building course system of platform, module and multiple-choice intermingling

According to the training objectives of entrepreneurial talent and innovation, breaking the original teaching mode, realizing internal integration of curriculum plans, increasing the proportion of cross disciplinary courses, it embodies cross penetration with science, engineering, economics, management and other disciplines to realize the integration of knowledge. The course is divided into 3 platforms: basic, professional and developing which set up 5 modules of specialized courses: the basic courses of Humanities and social science, the basic courses of natural science, the basic specialized courses, the required courses. The students need to complete the foundation, professional courses in three years which pay attention to the comprehensive training of knowledge, ability and quality. They enter enterprises deeply, research institutes practice and graduate design at the last year.

3.2 Building combination curriculum system with innovation and entrepreneurship education

On the professional core curriculum, the school set up professional compulsory courses of project development and design training. Such as the research and development of software, the design of e-commerce platform, course sensor equipment etc. They start with the relation between discipline and science and technology research and development, To guide the students to master the R & D projects, path and method of enterprise design, to participate in professional practice of innovation and entrepreneurship which based on the problems found to improve students ability to analyze and solve problems. We should focus on professional curriculum to open elective courses interdisciplinary. We should set up the introduction of economics, management introduction, entrepreneurship theory and other management courses on the basic courses of Humanities and Social Sciences; Specialized basic courses include software engineering, electronic technology and other courses. Professional development courses open Electronics Design Automation, creatology, e-commerce, enterprise management and management. To guide students in the study of interdisciplinary knowledge getting the necessary interdisciplinary thinking mode of innovation and entrepreneurship, finding the visual angle and ability to solve problems

4. INNOVATIVE ENTREPRENEURSHIP EDUCATION AND PRACTICAL EDUCATION ACTIVITIES WILL BE COMBINED

4.1 Constructing practice project of innovation and entrepreneurship

Implementing "project style" teaching combined with CDIO engineering education idea, demonstrating and organizing classroom activities such as engineering management, engineering technology, engineering cost, late maintenance, engineering ethics, professional ethics and so on, making use of actual projects to give students a thorough understanding of the whole process of innovation and Entrepreneurship with the help of modern methods of teaching chemistry.

In addition, through innovation and entrepreneurship projects to enable students to participate in some specific time, scientific management process innovation project or design competition, members form exploration and cooperation R & D capability, which can drive or drive potential each other to accomplish the task of the project in the process. Therefore, local engineering colleges and universities can be combined with the characteristics of local economy to provide some students to

participate in innovation and entrepreneurship research opportunities, deepen the implementation of the project feasibility analysis, project plan to enhance the thinking ability, enhance the study of the project management and practice ability. In order to train students' innovative ability, entrepreneurship, and enhance their practical ability. In addition, curriculum design, graduation design, thematic design, and other design projects can also permeate innovation and entrepreneurship content so that students form a holistic thinking of innovation and Entrepreneurship.

4.2 Establishing innovative and entrepreneurial practice education methods in line with students' cognitive law

Combining with the practical characteristics, to provide more involved in the application of innovation and entrepreneurship project training opportunities for students that they can participate in the innovation and entrepreneurship project and find students in the spirit of innovation in practice teaching, innovative thinking and innovative abilities are much better than them before, and this kind of spirit and thinking method will be in their day after the work and life habit. The fusion of innovation and entrepreneurship education and professional education in depth such as professional direction, course level, learning progress protruding personalized student-centered teaching, through the students' self-design and cross major course, promote the students' knowledge structure and permeability, combined with science and technology, interdisciplinary composite. And establishing the practice teaching model which combines the inside and outside, the practice innovation and the professional practice education, and actively promotes the joint training between universities and enterprises, and the students' practical innovation ability has been significantly improved.

5. COMBINED WITH LOCAL ECONOMIC TO BUILD INNOVATIVE TALENTS TRAINING MODEL

The local university of science and engineering has greater responsibility for serving the local economic development and utilizing the development features of the region, highlighting the theme of science and technology research and development, based on the innovation and entrepreneurship park, combined with the scientific research level of the Industrial Development Zone, it provides a higher level of platform for students' innovation and entrepreneurship education.

5.1 The local government support policies

Combine with employment situation of 2015 and 2016, the government should introduce relevant policy measures to support the early start of the graduates and increase efforts to support entrepreneurship small loans. According to research, small security loans issued normalization, lower security threshold, increase the amount of loans, simplify procedures [2]. Open up the "green channel" for college students' self-employment loans, and at the same time exempt students from submitting relevant certificates such as residence registration certificates and certificate of entrepreneurship training so that they can apply for loans directly

5.2 Students participate in local innovation projects

The innovation and entrepreneurship education of local science and engineering students cannot be divorced from the actual situation in this region. According to the local economic situation of university teachers in scientific research and development projects at the same time, let the students participate in, there is a collaborative team behind a project application, let the students participate in the team's research, discussion, data collection and so on that can allow students to quickly enter a new entrepreneurial mindset. In addition to university teachers apply for the national and provincial projects, schools should create innovative entrepreneurship education atmosphere for more students, establish scholarships or innovative research funds for students' innovation and Entrepreneurship, encourage different students to form a team to apply for innovation and entrepreneurship research fund. On the one hand, different majors can play their respective advantages to explore each other in the promotion of innovation ability, on the other hand, it can drive more students to participate in the project, innovation and entrepreneurship training habits in learning.

Secondly, the local government can increase the service guidance work of college graduates and students in accordance with their own needs, in order to meet the needs of entrepreneurs, characteristic entrepreneurship training should be carried out with incubation base as the platform. Relying

on science and Technology Park entrepreneurial private enterprises create entrepreneurship incubator, construct the business service system, helping local entrepreneurship, collaborative innovation, demonstration and guidance for college students' entrepreneurship, provide a broader business space for more students hit off.

The third way is to make full use of network resources, with reference to "MOOC" to build innovative entrepreneurship education platform and achieving Internet collaboration to meet the needs of teachers, students and entrepreneurs and other learners. At the same time, innovation and Entrepreneurship Forum. Based on a study, they should be set up at the school website, every student can speak at the forum and make comments and suggestions among the students [3]. This will enable more students to participate in it and they can also bring more ideas together.

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