

Research on Innovation and Entrepreneurship Education Model in Colleges and Universities Based on The Integration of Specialty and Innovation

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Abstract: With the introduction of the educational concepts of "innovation and entrepreneurship" education and "three comprehensive education" in colleges and universities, different colleges and universities have also begun to introduce extracurricular entrepreneurship practice cases and information-based dual-creation service platforms in the teaching activities of subject curriculum content. And developed a complete set of systematic "integration of innovation and integration" teaching plan. From the perspective of "integration of specialization and innovation" in the construction of disciplines and majors, the integration of production and education and school-enterprise cooperation education in different disciplines in colleges and universities should be based on the teaching system of "integration of specialization and innovation" and the information-based innovation and entrepreneurship service platform. Under the integrated teaching situation, reform and innovate the original classroom teaching content and education mode, strengthen the problem exploration and interactive communication between teachers and students, and focus on the cultivation of students' innovative and entrepreneurial awareness, theoretical and practical skills, so as to solve the problem of professional knowledge teaching. The contradictions in the demand of social talents.

Keywords: Integration of specialization and innovation, Colleges and universities. Innovation and entrepreneurship, Education model.

1. Foreword

Since the State Council issued the "Opinions on Promoting the High-Quality Development of Innovation and Entrepreneurship to Create an Upgraded Version of "Innovation and Entrepreneurship" in 2018, different colleges and universities have taken the education of innovation and entrepreneurship courses as the expansion and additional content of the teaching of professional courses, gradually making the disciplines more effective. The training of professional talents moves closer to the direction of national economic development and social talent demand. Through the introduction of the professional teaching concept of "integration of specialization and innovation", led by teachers with rich experience in the school, a network teaching situation integrating MOOCs and micro-courses is created, combined with extracurricular entrepreneurial practice cases, scientific research and innovative content, Make innovative designs for the teaching content and teaching methods of different subject courses, guide students to participate in practical activities in off-campus innovation and entrepreneurship bases, and promote the integration and development of innovation and entrepreneurship knowledge chain and practice chain.

2. The Meaning and Types of Innovation and Entrepreneurship Education Model from The Perspective of "Integration of Specialization and Innovation"

Compared with the traditional teaching mode that focuses on the content of textbooks and classroom cases in different subjects, the innovation and entrepreneurship curriculum education of "integration of specialization and innovation"

adheres to the practice-oriented classroom education concept and talent training goals, and uses off-campus innovation and entrepreneurship bases. , to provide students with a variety of knowledge content and practical learning experience, to stimulate students to participate in "inquiry-based" learning independently, and to realize the educational value of "specialized integration" of innovation and entrepreneurship courses. [1]

Judging from the "integrated innovation and integration" education of innovation and entrepreneurship carried out by different colleges and universities, different disciplines and majors often adopt point-like, chain-like and other teaching link design schemes. First of all, the "point-like" teaching organization design of specialized creative and integrated courses divides different professional theoretical knowledge and practical teaching methods inside and outside the classroom into multiple point-like classification modules, and each module contains a large type of knowledge points. . For example, in the teaching setting of computer subject courses, there are module contents such as "Computer Public Fundamentals" textbook theory, JAVA/C language program assembly, PLC single-chip automatic control system, software application cases, etc., which are taught by subject teachers in computer public compulsory courses and extracurricular practice teaching. It is the most common and common course teaching mode in colleges and universities, explaining basic theoretical knowledge and practical application methods to students.

Afterwards, the "chain-like" teaching of innovation and entrepreneurship and "integration of specialization and innovation" takes students as the center of curriculum education, takes subject curriculum issues as the starting point, and aims to cultivate comprehensive practical talents, and creates problem-inspired situations, online and offline. The teaching links such as course explanation, interactive

discussion between teachers and students, and case practice experience, etc., strengthen the interconnection between professional theoretical knowledge points and practical cases in different links, and evaluate the teaching achievements of entrepreneurship practice cases and scientific research innovation content inside and outside the classroom, so that Students change from "passive" knowledge acceptance and memory to "active" exploration and application of innovation and entrepreneurship problems, and apply the knowledge they have learned to the solution of complex social problems.

3. Problems Existing in the Teaching of Innovative and Entrepreneurship Education of "Integration of Specialty and Innovation" in Colleges and Universities

Compared with the teaching of foreign "integrated innovation and entrepreneurship" innovation and entrepreneurship courses, there are still gaps in educational concepts, teaching content, teaching methods, etc., including the following teaching problems: [2]

3.1. Different Subject Courses Lack Innovation and Entrepreneurship-oriented Educational Goals

The most important thing for the integrated development between the teaching of professional courses in colleges and universities and the practical education of innovation and entrepreneurship is the school administrators and teaching staff. , students' practical application ability training, etc., to design basic theoretical knowledge, practical teaching cases, and teaching methods.

However, at present, most college teachers lack the thinking consciousness of "specialized innovation and integration", and still follow the traditional theoretical knowledge "indoctrination and teaching" plan to explain the existing subject theories and practical cases in the textbook, ignoring the students' own learning conditions and personality preferences. Realistic factors such as these make the theoretical and formalization of subject course teaching serious, which cannot be connected with the talent needs of social enterprises, and it is difficult to achieve the educational effect of driving students to innovate scientific research and entrepreneurial practice.

3.2. The Teaching Situation, Teaching Content and Methods of Subject Courses Lack Innovation

The rapid development of big data, cloud computing technology, and "Internet +" information technology has forced colleges and universities to start from the introduction of extracurricular professional knowledge content, as well as the application of MOOCs and online online teaching platforms for micro-courses. Reform and innovation of curriculum education content and teaching methods.

However, the actual situation is that some colleges and universities have not created a teaching situation that conforms to students' cognition in the teaching process of professional courses, and seldom introduced from extracurricular channels, entrepreneurial practice projects and innovative research cases related to the teaching content of this course. Instead, it still focuses on the content of school-

based textbooks and classic classroom practice cases to explain and convey cultural and scientific knowledge. At the same time, although teachers have used multimedia software, PPT courseware and other network equipment to carry out practical demonstration education for students in different subject courses, they have not yet built a networked online teaching platform, leading to innovation and entrepreneurship between teachers and students. Practice and online interaction have encountered great obstacles.

3.3. The Construction of Innovation and Entrepreneurship Training Rooms and Practice Bases Inside and Outside the School Needs to Be Improved

Under the guidance of the concept of "integration of innovation and entrepreneurship", the main goal of the teaching activities of innovation and entrepreneurship courses in colleges and universities is to transform the existing professional theoretical knowledge and scientific research practice cases into project results with social value, so as to generate considerable social and economic benefits as much as possible. . At present, the realization of the achievement transformation goal of this project is faced with the problems of the lack of facilities for innovation and entrepreneurship training rooms on campus and the imperfect construction of off-campus social practice bases. [3]

On the one hand, some colleges and universities are limited by the shortage of educational development planning and financial funds, and seldom build training rooms for liberal arts disciplines. In addition to computer science, innovative training rooms and experimental equipment in other science and engineering disciplines are still outdated and lacking. On the other hand, social enterprises rarely provide opportunities for professional teachers and students to participate in extracurricular practice due to the consideration of industrial management benefits. The construction of industrial practice bases is also limited to entrepreneurship guidance centers, and cannot provide entrepreneurial projects for students' subject courses. Practice, innovative research and other activities, provide sufficient support and guidance.

3.4. Insufficient Teaching Staff and Educational Support Policies for Innovation and Entrepreneurship Courses

The innovation and entrepreneurship course education of "integration of specialization and innovation" requires the introduction of teaching teachers with solid theoretical knowledge and rich practical experience in the school, so as to ensure the normal development of education activities of dual entrepreneurship courses inside and outside the classroom. However, at this stage, the teachers who participate in the teaching of subject course content and case practice content in colleges and universities are all full-time teachers who have graduated from the college. Although they have solid and comprehensive professional basic theoretical knowledge, they lack practical experience in social entrepreneurship projects. In the course of the course teaching activities, it is only explained according to the textbook cases, and it is difficult to provide students with classroom innovation cases, extracurricular entrepreneurial practice guidance and question answers, so that the innovative and entrepreneurial teaching auxiliary role of "specialization and innovation integration" cannot be brought into play.

4. An Innovation and Entrepreneurship Education Practice Platform Jointly Built by Schools and Enterprises from the Perspective of "Integration of Specialization and Innovation"—— Take X University as An Example

In recent years, since 2015, X university have formed cooperation with the local B Entrepreneurship Service Co., Ltd. and entrepreneurial incubation base. After 6 years of construction, hundreds of lectures on innovation and entrepreneurship have been held, and more than 2,000 entrepreneurial projects of college students have been collected. Funding and incubation There are also about 50 entrepreneurial projects for college students.

Therefore, in the practice teaching of innovation and entrepreneurship in subject professional courses, different colleges and universities have begun to try to build a dual-creation training room that meets the needs of the classroom according to the actual education situation in the school, and form close cooperation with social enterprises outside the school to incubate subject curriculum teaching, An integrated network platform that integrates simulation and practice. [4] The structure of the innovation and entrepreneurship education practice platform is based on the innovation and entrepreneurship incubation base that has been built and combined with the content of the existing subject curriculum textbooks. Go deep into the innovation and entrepreneurship platform, carry out specific entrepreneurial practice projects, guided teaching of innovative scientific research activities, strengthen independent learning, project competition, and innovative practice education in a certain professional direction, play a role in refined design, heavy support, strong methods, and development. The teaching effect of innovation and entrepreneurship practice.

Among them, "fine design" is based on the theoretical knowledge of subject courses. In the teaching process of classroom knowledge content, subject teachers closely combine basic theories and practical cases, and guide students to enter the innovation and entrepreneurship training room and incubation laboratory. Simulation teaching is carried out for specific science and engineering practice cases and project experiments, so that students can participate in simulation demonstrations and problem exploration independently. For example, in the education of innovation and entrepreneurship simulation practice and extracurricular entrepreneurship and innovation competition, teachers can encourage students to formulate specific project entrepreneurship plans according to the needs of the social market, and carry out practical activities including product development, realization of principle design, industrial operation, functional docking, etc. , to form a practical education system of professional knowledge learning, scientific research and exploration.

The "heavy support" is to rely on the software and hardware such as the experimental training room for innovation and entrepreneurship, the online education platform, as well as the teaching resources of professional teachers and teachers of innovation and entrepreneurship, to guide and guide students to learn basic theoretical knowledge and practical content, improve different software Supported scaffolding for hardware. Professional teachers here are mainly responsible for teaching students subject expertise,

practical cases, and providing guidance for their future innovation and entrepreneurship activities; while innovation and entrepreneurship teachers adhere to the concept of "integration of specialization and innovation" and participate in practical projects with students Entrepreneurial practice, problem exploration, and detailed guidance and explanation of specific project content and practice methods.

Finally, "strengthening methods" and "promoting development" are based on the teaching experience of professional teachers. Students use corresponding experimental tools and dual-creation training laboratories to set up a project practice execution process to explore a certain problem. The basic tacit knowledge is made explicit. During the implementation of the experimental process of specific professional projects, through scientific and perfect innovation and entrepreneurship training and practical system constraints, the team awareness and social responsibility among different students are enhanced.

5. Innovative Research on Innovation and Entrepreneurship Education Model in Colleges and Universities Based on the Integration of Specialty and Innovation

5.1. Construct A Student-centered "Integration of Innovation and Entrepreneurship" Education Goal of the Integration of Specialty and Innovation Courses

The quality of the teaching quality of innovative exploration and entrepreneurial practice in different majors is most fundamentally determined by judging whether teachers are student-centered, social practice project-oriented, and organize the design of the entire curriculum education system, teaching content and teaching methods. On the basis of taking students' professional learning status and social talent needs as educational goals, college teachers should abandon the traditional concept of innovation and entrepreneurship education, and combine the knowledge content of existing professional textbooks with off-campus entrepreneurship projects and innovative practice cases to organize and set up To develop a systematic innovation and entrepreneurship knowledge education system, including innovation and entrepreneurship plan, classroom knowledge explanation, case interactive practice, simulation and demonstration teaching links, used to guide disciplines such as economics and management, accounting, computer, electrical, etc. Problem-oriented, theoretical and practical teaching.

5.2. Create An Innovative and Entrepreneurial Teacher Team and A Practice Platform of The Integration of Specialty and Innovation

The theoretical and practical teaching of professional courses in different disciplines in colleges and universities should first hire social entrepreneurs and experts with rich experience in innovation and entrepreneurship, adhere to the educational concept of "one construction, two integration, and the whole process", and carry out practice for internal professional teachers. The talent training and education of case and practical projects fully combines the existing professional teaching material knowledge system with

extracurricular innovation and entrepreneurship cases and practical project resources, so as to ensure the mastery of theoretical knowledge and the improvement of practical ability of the full-time teachers. [5]

Later, from the perspectives of classroom teaching situation creation, problem-guided education, and students' practical application, college administrators will take the lead and cooperate with off-campus enterprises and institutions to establish an online education platform, dual-creation training rooms, and off-campus innovation and entrepreneurship practice bases. The existing "indoctrination and teaching" teaching mode provides students with comprehensive education such as classroom online demonstration, training room operation practice, base project experiment, etc., to form the integration of subject curriculum, innovation and entrepreneurship theory and practice, and effectively improve the integration of specialization and innovation. quality of education.

5.3. Innovate and Improve the Teaching Content and Methods of the Subject Course "Creation-Learning-Training"

With the support of internal and external entrepreneurship training rooms, innovation and entrepreneurship practice bases and other hardware facilities, the teaching of innovation and entrepreneurship courses in local colleges and universities should also start from the creation of teaching situations, the formulation and exploration of teaching problems, and the optimization of teaching processes. The educational program of entrepreneurship and innovation teaching, independent inquiry learning, and practical training inside and outside the classroom, reform and innovate the original course teaching content and teaching method. [6]

Among them, in the innovation of the teaching content of the professional courses, it is necessary to simplify the basic theoretical content of the existing textbooks, introduce and improve the extracurricular teaching cases and practical projects, set them up as multiple knowledge modules, reasonably increase the hours of practical teaching, and conduct students The cultivation of disciplinary entrepreneurial ideas, innovative awareness and ability stimulates the enthusiasm for independent inquiry of problems and participation in learning through practice.

On the other hand, for the innovation of teaching methods of innovation and entrepreneurship courses, it is necessary to rely on online teaching channels such as MOOCs, micro-courses, and flipped classrooms to guide students to participate in online and offline classrooms, participate in the training operation of the Maker Center, and the experiments of social projects. During the activity, the problem exploration and interaction between teachers and students are strengthened to improve students' innovative awareness and entrepreneurial ability in subject knowledge learning.

6. Epilogue

In recent years, domestic colleges and universities have

begun to try to introduce innovative education models and entrepreneurial practice cases into the teaching of professional theory and practice in the teaching of professional courses, and have produced significant teaching results in some science and engineering disciplines. Therefore, make full use of educational resources such as teaching teachers in colleges and universities, subject training practice rooms, integrate the theoretical knowledge and practical cases of innovation and entrepreneurship inside and outside the school, carry out innovative design of course teaching situations, teaching content, and teaching methods, and guide students to carry out different professional courses. Theoretical knowledge learning, as well as strengthening industrial project case practice, teacher-student interaction and other teaching, can promote the coordinated and integrated development of professional basic theoretical knowledge and practical application in colleges and universities.

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