

# Study on Innovation and Entrepreneurship Teaching Reform College Students in China

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**Abstract:** In the context of innovation driven development strategy, the country needs a large number of innovative and entrepreneurial talents, and colleges are the main position to cultivate high-level innovative and entrepreneurial talents. Focusing on the innovation and entrepreneurship teaching reform issue in colleges, firstly, this paper constructs the innovation and entrepreneurship teaching mode, and then puts forward the teaching reform path orienteered by innovation and entrepreneurship education, from the perspective of education environment, practice platform and education mode.

## 1. Introduction

Innovation is not only an important force to promote the development of a nation, but also to promote the development of the whole human society. At present, the government vigorously promotes entrepreneurship from top to bottom, which undoubtedly brings opportunities for the rapid development of entrepreneurship education in colleges. Some scholars believe that entrepreneurship is a social behaviour with high environmental sensitivity. This characteristic determines that to improve the innovation and entrepreneurship ability of college students, we should not only pay attention to the cultivation of a single aspect, but also integrate and coordinate all aspects of the elements related to innovation and entrepreneurship education to form a virtuous cycle system like the ecosystem. This system includes many subsystems, including colleges, governments, enterprises, families and students. Each subsystem is connected, interacted and supported with each other, forming a complete innovation and entrepreneurship education system.

Focusing on the innovation and entrepreneurship teaching reform issue in colleges, this paper first put forward the goal of innovation and entrepreneurship education, and then construct the innovation and entrepreneurship teaching mode. At last, we put forward the teaching reform path orienteered by innovation and entrepreneurship education, from the perspective of education environment, practice platform and education mode.

## 2. Goals of College Students' Innovation and Entrepreneurship Education

### 2.1 General Goal

Cultivation of quality creative talents is the general goal of innovation and entrepreneurship education in colleges. The core issue of innovation and entrepreneurship education is “what kind of talents should be cultivated”. Although the teaching concept of innovation and entrepreneurship is novel, it is essentially the same as traditional education in nature, and it is consistent with the goals of the overall education plan of colleges. As we all know, college innovation and entrepreneurship education is a new requirement for education reform in the new century. At the same time, we should also notice that there are certain differences in the goals of innovation and entrepreneurship education in different types of colleges. For comprehensive and liberal arts colleges, they pay attention to students' innovative entrepreneurship and ability on the one hand, and knowledge structure and comprehensive qualities of students on the other. For comprehensive and liberal arts colleges, on the one hand, they pay attention to students' awareness of innovation and entrepreneurship, and on the other hand, they also pay attention to their knowledge structure and

comprehensive quality. The purpose is to help students build solid theoretical knowledge and open up their horizons. For engineering colleges, due to the nature of their profession, the goal of their innovation and entrepreneurship education is to focus more on cultivating students' practical and operational capabilities and improving their entrepreneurial capabilities. But generally speaking, no matter the type of school, their general goal of innovation and entrepreneurship education is to cultivate students' innovation consciousness, stimulate their potential for innovation and entrepreneurship, and cultivate new high-quality talents with pioneering spirit for the modern society.

## 2.2 Personalized Goal

The goal of innovation and entrepreneurship education in colleges is to cultivate the pioneering spirit of engineering students and improve their entrepreneurial ability. Innovation and entrepreneurship education in colleges can be divided into three levels of personalized objectives:

The first level is to provide new talents with good quality of innovation and entrepreneurship for the future society. The goal of this level is universally applicable. The principle is to provide innovation and entrepreneurship education for every student, which is the most basic and core personalized goal. It requires that the concept of innovation and entrepreneurship education should be connected with the daily education and other professional teaching of the school, run through the whole education system of college students, and lay a solid foundation for the knowledge structure, ability and psychological quality required by the future social talents.

The second level is to cultivate the creators of self-work posts. The focus of this goal is to carry out different innovation and entrepreneurship education for students of different majors. In order to achieve this goal, we should carry out professional knowledge teaching and innovation and entrepreneurship ability training according to the different majors of the educated object, so that students can rely on their own professional expertise after graduation, and find their own unique positions in the competitive employment market.

The three level is to make individuals become entrepreneurs of management enterprises. This goal is aimed at those college students who have already started their own business. Generally speaking, these students have outstanding pioneering, innovative ideas and leadership ability. We should select those students with strong innovation spirit and outstanding leadership ability to provide them with guidance for innovation and entrepreneurship, and support them to join in innovation activities, so that gradually accumulate entrepreneurial experience.

## 3. Construction of Innovation and Entrepreneurship Teaching Mode

Under the guidance of the national entrepreneurship education policy, colleges can try to establish entrepreneurial education model based on their own characteristics and advantages. The core of innovation and entrepreneurship education mode is students' innovation behaviour, which focuses on the virtuous circle between innovation consciousness, innovation practice and innovation achievements, and provides support for students' innovation behaviour with group incentive system, funding system, guidance and support system, competition and exchange system, transformation system and individual evaluation system. The innovation and entrepreneurship education mode is shown in Figure 1.

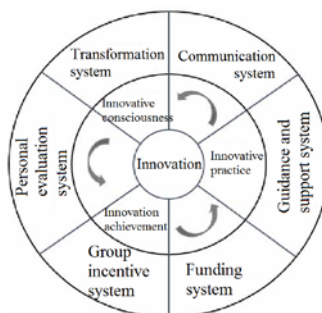


Fig.1 The Innovation and Entrepreneurship Teaching Mode.

The innovation and entrepreneurship teaching mode can be divided into three stages: innovation practice stage, innovation achievement stage and innovation consciousness stage. In the innovation practice stage, on the one hand, the colleges can stimulate the students' innovation consciousness through the group incentive system, on the other hand, it can select and protect the students' innovation potential through the funding system.

In terms of innovation consciousness cultivation, teachers could create a cultural atmosphere through various mass scientific and technological innovation activities to release and stimulate students' innovation consciousness. Extracurricular academic and technological activities are not only the effective means of innovation and entrepreneurship education in colleges, but also the basis and premise of entrepreneurship education for students. The purpose of this type of mass scientific and technological innovation activities is not to innovate the results, but to motivate students' initiative and creativity through group incentives, and to maximize their ability in innovative and entrepreneurial activities.

In terms of funding support, through the collection and use of innovation funds, colleges could provide development opportunities for outstanding innovation “seeds”. Colleges can set up special funds to support students' scientific and technological innovation projects. These funds are the start-up funds for university students' innovation projects and play a key role in putting students' creative ideas into practice.

In terms of guidance support, colleges can select experts from various industry fields and professors to form expert committees to guide students' innovation projects. At the same time, colleges could try to fully improve the utilization of existing resources, and open the laboratory to students to provide students with a broad basic place for entrepreneurship. For off-campus resources, colleges can actively contact the support of industries and enterprises in the community to establish a number of off-campus innovation activity bases to provide students with multi-level resource support.

While carrying out a variety of extracurricular academic and scientific activities, colleges can rely on the entrepreneurship plan competition to systematically train students' entrepreneurial qualities, entrepreneurial consciousness, and entrepreneurial ability, and explore a fruitful entrepreneurial education model with Chinese college characteristics.

In terms of innovation and entrepreneurship curriculum system, colleges should integrate the concept and content of entrepreneurship education into teaching plans, teaching content and teaching methods, to build the innovation and entrepreneurship course group, as shown in Table 1.

Table 1 Innovation and Entrepreneurship Course Group.

Module	Course
Innovative Education Module	Elective courses
	Minor courses
	Skills training course
Employment Education Module	International certification program
	Postgraduate entrance examination training course
	Second degree construction
Certificate Education Module	Vocational qualification certificate guidance course
	Industry qualification guidance course
	Certificate training

The course group is divided into three modules: entrepreneurship education module, employment education module and certificate education module. At the same time, set up six course systems based on credit system, that is, elective course system, minor course system, certification course system, national vocational qualification training course system, skill training course system and postgraduate entrance examination training course system. Each major offers the innovation and entrepreneurship elective courses corresponding to the professional field, such as project research and development training course, paper study course, professional entrepreneurship practice course, etc.

## **4. The Teaching Reform Path Orienteered by Innovation and Entrepreneurship Education**

### **4.1 Create an Environment for Innovation and Entrepreneurship**

#### **(1) Optimize the campus education atmosphere**

The cultivation of college students' innovation and entrepreneurship is inseparable from the influence of campus cultural environment. Therefore, it is necessary to build a campus environment with innovation and entrepreneurship atmosphere. The importance of campus innovation and entrepreneurship atmosphere mainly lies in cultivating students' innovation spirit, struggle spirit, entrepreneurship enthusiasm, social responsibility consciousness, team cooperation and other positive campus atmosphere. The significance of campus environment construction in colleges lies in providing new educational contents and activities for college students, as well as a new perspective for the cultivation of innovation and Entrepreneurship of college students. The core of campus environment construction is the campus spiritual and cultural factors. Nowadays, the construction of campus spiritual culture in some colleges is to organize colourful cultural activity, many of which tend to enrich the spare time life of college students. Only a few colleges and colleges put campus spiritual culture into long-term planning. Therefore, the university should embody the spirit of innovation and entrepreneurship in the construction of the campus environment, create a good atmosphere of the campus environment, give full play to the role of the campus environment atmosphere, so that college students can self-shape the spirit of innovation and entrepreneurship.

#### **(2) Change the traditional family education concept**

Family education is the first classroom for students, and the cultivation of college students' innovative entrepreneurship also needs to change the traditional family education concept. Firstly, strengthen the sense of responsibility of parents, so they could realize that the cultivation of college students' innovative entrepreneurship is not only the task of the school, but also needs the cooperation of parents; secondly, colleges should provide parents with certain training to keep up with their awareness of innovation and entrepreneurship education and then help college students cultivate innovation and entrepreneurship; finally, Parents should abandon the traditional concept of education, and refuse to overindulge their children by cultivating their spirit of hard struggle.

#### **(3) Focus on social media publicity**

Social publicity can effectively increase the influence of innovation and entrepreneurship and make college students realize the importance of it. Colleges can make full use of social electronic network media, such as wechat, campus electronic software, microblog and other media, to introduce the specific connotation and significance of the innovation and entrepreneurship, and improve the ideological awareness of college students, so as to let college students condense their innovation and entrepreneurship in the atmosphere of school and social publicity.

### **4.2 Improve Innovation and Entrepreneurship Education Practice**

#### **(1) Build the practice platform**

The cultivation of college students' innovation and entrepreneurship requires practice. It is an effective means to build a platform for innovation and entrepreneurship practice, for example, set up internship base, incubation base of entrepreneurship projects and other practice platforms. On the one hand, these practice platforms help college students to broaden their horizons, and apply their professional knowledge and practical ideas to practice, so that accumulate valuable experience in practice; on the other hand, the practice platform is helpful to the personal development of college students. College students will constantly exercise their will in practice, feel the benefits of teamwork, and form a scientific and adventurous spirit. In addition, the practice platform provides opportunities for extensive cooperation and exchanges among college students, broadens the field of college practice, and effectively improves the success rate of college entrepreneurship.

#### **(2) Increase practice resource allocation**

To comprehensively cultivate the spirit of innovation and entrepreneurship of college students, a large amount of practical resources are necessary. Injecting resources into spiritual cultivation is difficult to complete by colleges alone, but requires the joint efforts of the government, colleges,

and enterprises. The first thing is the interaction between the government and colleges. This requires maintaining communication between colleges and the government, combining the demands of actual education, allocating resources cultivated by the spirit of innovation and entrepreneurship, and using resources rationally, scientifically and effectively according to their own advantages and disadvantages. The second thing is cooperation between colleges and enterprises. Colleges and enterprises should take the initiative to break the boundaries, to build a school-enterprise cooperation platform, and form a school-enterprise joint education model through the platform.

#### **4.3 Explore Scientific Innovation and Entrepreneurship Education Mode**

##### **(1) Learn from mature education models**

From the perspective of innovation and entrepreneurship education culture, Stanford is one of the most successful examples. Stanford provides teachers and students with an inclusive entrepreneurial education campus culture, and understanding and tolerance for failure has largely inspired college students' innovation and entrepreneurial enthusiasm. Stanford encourages students to participate in social practice. This spirit has formed a campus culture, which is the basic condition for the cultivation of college students' innovative entrepreneurship. University of Warwick in UK is a top university for entrepreneurial education in European universities. The University of Warwick has infiltrated the campus culture into the management system, and its essence is to integrate the corporate management concept into the university's management practice. Its campus corner is full of innovative, optimistic and adventurous campus culture, which makes The University of Warwick a typical example of entrepreneurship education.

There is still a certain gap between China's innovative entrepreneurship cultivation concept and the United States and other western developed countries. It is worth thinking and studying that the idea of self-determination in curriculum setting and application of learning. The cultivation of the innovative and entrepreneurial spirit of China's colleges should draw on mature international experience, and combine with our own actual conditions to explore a cultivation culture with Chinese characteristics.

##### **(2) Explore scientific cultivation methods**

The disadvantages of traditional innovative education methods are becoming more and more obvious. In order to deal with the disadvantages of traditional innovation and entrepreneurship education methods, universities should explore more scientific and effective cultivation methods.

Firstly, individualization of cultivation methods. Every college student has its own advantages and disadvantages. According to the characteristics of students' personalities, some "private customization" innovative entrepreneurship cultivation methods are appropriate, and the teaching effect of students would be better.

Secondly, effectiveness of cultivation methods. A good cultivation method must be one in which students actively participate. To improve the interest of the cultivation of innovation and entrepreneurship, and to let college students actively participate in the course of spiritual cultivation, is the primary problem of the reform of cultivation methods in colleges.

Thirdly, scientific nature of cultivation methods. Colleges cannot rely on "tradition" and "fantasy" to develop spiritual cultivation methods, but should be guided by the scientific cultivation concept, dare to criticize and doubt, and form a dynamic scientific cultivation method.

#### **5. Conclusion**

The essence of innovation and entrepreneurship education in colleges is to stimulate the spiritual value of college students, which requires efforts in building an education environment, building a practice platform, strengthening the construction of teachers, updating the education concept, exploring the cultivation methods and other key aspects. The formation of innovation and Entrepreneurship of college students mainly depends on the cultivation of postgraduates. As a place to receive education directly, colleges should be not only the main position of knowledge innovation, knowledge dissemination and promotion, but also the catalyst for cultivating talents. Colleges should set up the suitable educational objectives, and create a good environment for the

cultivation of innovation and entrepreneurship, so as to enable students to give full play to their initiative, constantly improve themselves and develop in an all-round way, and then gradually cultivate students' spirit of innovation and entrepreneurship, and improve the ability of innovation and entrepreneurship.

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### **References**

- [1] Eric L. Wang, John A. Kleppe. Teaching Invention, Innovation, and Entrepreneurship in Engineering [J]. Journal of Engineering Education, 2001, 90(4):565–570.
- [2] Innovationentrepreneurship T. Teaching Innovation and Entrepreneurship: Building on the Singapore Experiment.[J]. 2009, 16(3):314-315.
- [3] Kleppe, J.A. Teaching invention, innovation, and entrepreneurship to Northern Nevada high school science and math teachers[J]. Antennas & Propagation Magazine IEEE, 44(5):115-119.
- [4] Junzheng Wang, Yahong Liang, Jingli Wang. Innovation and Entrepreneurship Education Ways of Agricultural Mechanization Majors[C]// 2nd International Conference on Arts, Design and Contemporary Education. 2016.
- [5] Saskia Harkema, Henk Schout. Incorporating student-centered learning in innovation and entrepreneurship education[J]. IEEE Engineering Management Review, 2012, 40(2):164-174.
- [6] Zhu Hai-Bo, Zhang Kun, Ogbodo U. Review on Innovation and Entrepreneurship Education in Chinese Universities during 2010-2015[J]. Eurasia Journal of Mathematics Science & Technology Education, 13(8):5939-5948.