Design on the Systematic Framework of Innovation and Entrepreneurship Education in Colleges and Universities

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Abstract. Innovation and entrepreneurship is a national innovation-driven development strategy. Innovation and entrepreneurship education and the construction of entrepreneurial universities have gradually formed a new normal. There are some problems in innovative and entrepreneurial talents training in existing colleges and universities, such as unclear objectives, short-term behavior, backward innovation and entrepreneurship education ideas, weak teachers, imperfect curriculum system, and the break chain of innovation and entrepreneurship education. The comprehensive system, supporting system, innovation and entrepreneurship education system and practical teaching system of talent training have been designed across the whole process of colleges and universities by analysis of the current situation of innovation and entrepreneurship education. The cultivation system of innovative and entrepreneurial talents is not only solving the problems of derailment of theory and practical application, but also improving practical ability and weak innovation consciousness of students.

Introduction

The implementation of national innovation driven development strategy needs the support of innovation and entrepreneurship education in Colleges and universities. The Ministry of Education's "Opinions on Promoting Innovation and Entrepreneurship Education in Colleges and Universities and the Work of College Students' Independent Entrepreneurship" [Educational Office No.2010.3] proposed that we should vigorously promote the work of innovation and entrepreneurship education in Colleges and universities, strengthen the construction of innovation and entrepreneurship education curriculum system, and effectively incorporate innovation and entrepreneurship education into the teaching. We should establish a multi-level and three-dimensional innovation and entrepreneurship education curriculum system, strengthen the construction of entrepreneurship bases, and create an all-round entrepreneurial support platform. Innovation and entrepreneurship education in Colleges and universities is a long-term, complex system engineering, and diversified education. Innovation and entrepreneurship education needs the cooperation of the government, enterprises and colleges and universities. The macro-design of innovation and entrepreneurship education in Colleges and universities are carried out by the state. The innovation and entrepreneurship education programs need design by the provincial and higher education institutions according to "Made in China 2025", the craftsmen of big countries and the modern society needs for talents. It should strengthen Innovation and entrepreneurship education.

Various researchers have approached the study of innovation. It is found that the research of innovation and entrepreneurship education is mainly based on the research of the training mode in CNKI database. Chengjie Di, Min Qiang, Zhaolong Wang (2016), Na Zheng, Yujie Wu (2018), Li Zhang, Meng Shan (2018), Ashurst, C. (2012) have taken the "Internet +" innovation and entrepreneurship training [1-4], Tabitha L. James etc. (2015), Wei Du, Bing Li (2018), Yugang Zhang (2018) studied collaborative innovation and Entrepreneurship Talent Training Model [5-7]. There are 335 articles on the construction of innovative and entrepreneurial personnel training system, mainly the documents is between 2017 and 2018. Xiaofen Zhang, Xianrui Shi (2018) and Jianxin Zhang (2018) studied the school-enterprise cooperation innovative and entrepreneurial personnel training system, but it is lack specific design [8-9].
Analysis of the Current Situation of Innovation and Entrepreneurship Training

At present, China's higher education system has been improved, but there are many problems too in the cultivation of innovative and entrepreneurial talents, such as lack of information literacy education teaching organization and guarantee system, unclear training objectives, short-term target behavior, backward innovative and entrepreneurial education ideas, weak innovative and entrepreneurial mentors. It is difficult to train innovative and entrepreneurial talents in China. First, there is an imperfect curriculum system, second, there are the broken chain of innovation and entrepreneurship education. It is necessary to strengthen the cultivation of College Students' comprehensive ability. The students need to study the cultivation system of innovative and entrepreneurial talents, construct a reasonable comprehensive cultivation system of innovative and entrepreneurial talents. Third, the students can accept the perfect education of innovation and entrepreneurship in the whole university education, and improve the success rate of innovation and entrepreneurship.

Design of Training Mode for Innovative and Entrepreneurial Talents

Design of a Comprehensive System for Training Innovative and Entrepreneurial Talents

Innovation and entrepreneurship education should be integrated into the whole process of Education. After years of exploration, we divide the cultivation of talents into four stages by the law of cultivation and growth of innovative and entrepreneurial talents, the first stage is training consciousness of innovation and information, the second stage is tamping foundation, the third stage is promoting practice ability, and the fourth stage is incenting innovation. There are five processes by the four stages of learning, for example information literacy training, knowledge accumulation, practical ability development, germination of innovation consciousness, innovation incubating. It is shown in Figure 1.

The cultivation of information literacy is a kind of skilled education that enables students to have the ability of lifelong learning, critical thinking and innovation and entrepreneurship. Innovation and entrepreneurship education in information society requires entrepreneurs to have strong information acquisition ability, analytical ability and innovative ability. Information literacy training should be combined with innovation and entrepreneurship education. Information literacy of the students can play an important role in innovation.

It is to perfect students' thinking habits that strengthen innovation and entrepreneurship education in general education. The students can look at problems and analyze problems from the perspective of entrepreneurs, and receive innovation and entrepreneurship education in the university.

Construction of Support System for Innovation and Entrepreneurship Training

In order to carry out innovation and entrepreneurship activities better, we need the support system of innovation and entrepreneurial talents training. It includes innovation and entrepreneurship base,
Innovation and entrepreneurship teachers' guidance team, innovation and entrepreneurship fund. The support system is shown in Figure 2.

![Supporting system of training for innovative and entrepreneurial talents](image)

Innovation and entrepreneurship bases include the National University Science and Technology Park, student innovation center, innovation studio, innovation and entrepreneurship special studio, etc. Student innovation center provides innovative design, innovation practice environment and training base at ordinary times; Innovation Studio and innovation and entrepreneurship special studio provides services for the students that have a clear thinking of innovation. The National University Science Park provides a platform for students to innovate. Students can register enterprises in it. It can provides support for students to start enterprises.

The guidance teachers of innovation and entrepreneurship come from our or other universities, and technological achievements transformers, outstanding entrepreneurs, outstanding innovation teams, venture capital teams and other teachers who are integrated with industry, university and research unit. They can provide guidance to students of innovation and entrepreneurship, and guide students to carry on innovation and entrepreneurship activities. Innovation and entrepreneurship instructors can build innovation and entrepreneurship training camp, and conduct innovation and entrepreneurship education, and there are some teachers to guide students to practice, and they can provide innovation and entrepreneurship funds, it is better to innovation and entrepreneurship.

Universities, governments and enterprises set up special funds to support the practice of innovation and entrepreneurship for the teachers and students, and provide financial support to innovation and entrepreneurship activities. These subsidies can have different forms, such as creditor's rights, equity forms of support to innovative entrepreneurs as initial fund. The students can join in innovative entrepreneurial activities.

**Design of Innovation and Entrepreneurship Education System**

The integration of innovation and entrepreneurship education with information literacy education and professional education is illustrated in Figure 3. The innovation and entrepreneurship education and information literacy education will be integrated into the general education of the entire planning. There are some innovation and entrepreneurship education courses in it. The successful entrepreneurs, pioneers of enterprise innovation tell entrepreneurial course, innovation and entrepreneurship ideas. The student can learn the concept of innovation and entrepreneurship that integrate between innovation and entrepreneurship education and professional education in professional education.

![Innovation and entrepreneurship education system](image)

**Design of Practical Teaching System for Innovation and Entrepreneurship**

In order to strengthen the cultivation of innovative and entrepreneurial talents in the whole process, the students have been engaged in four-year uninterrupted practical activities, from basic teaching practice, professional curriculum design, professional knowledge practice, professional practice to graduation design. It is composed of responsibility-driven, problem-driven, achievement-driven to interest-driven. There are some Layers, such as basic layer, raising layer, strengthen layer and
promote layer. It is a perfect to innovation and entrepreneurship practice teaching system, it is shown in Figure 4.

![Figure 4. Innovation and practice teaching system.](image)

**Implementation of Innovation and Entrepreneurship Training System**

The training system of innovative and entrepreneurial talents can only be determined to practice.

**Cultivation of Information Literacy**

The student should have a good information literacy in innovation and entrepreneurship. It strengthens the cultivation of students information literacy and innovation and entrepreneurship awareness in the personnel training programs. It increases information literacy and innovation and entrepreneurship courses. The students can collect information and make information. They can well grasp information, and constantly enhance the awareness of innovation and entrepreneurship by practice. It has been strengthened the idea of personalized innovation and entrepreneurship.

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The students accumulate knowledge by studying basic courses. It is the foundation of innovation and entrepreneurship. The existing knowledge system is constantly integrated, making the new knowledge system in the process of personnel training, it is more conducive to consolidate the knowledge base of innovation and entrepreneurship. It is a good foundation of innovation and entrepreneurship.

**Promotion of Practical Ability**

The traditional teaching concepts have changed in many universities, it has established a new teaching mode of personnel training, and strengthened the practice link. For example, in the course design, cognitive practice, professional practice, graduation design and other links. It has improved the practice ability. The students go to enterprises and institutions and practice base. The students get innovative and entrepreneurial ability in practice. In addition to the above-mentioned compulsory links, innovative and entrepreneurial practice bases have also been established, and universities and enterprises have built innovative and entrepreneurial practice bases together, such as some colleges and universities to explore commercialized innovative and entrepreneurial education and practice bases. Many colleges and universities held the university entrepreneurship planning contest, provincial or national university challenge cup contest, it stimulated students enthusiasm and sense of achievement in challenging in practice, it lift students academic interests and the spirit of exploration
Learning. All kinds of resources of enterprises and society melt into campus. It is a perfect mechanism to cultivating innovative and entrepreneurial talents. The entrepreneurs and investors come to university, and the students go to the society. The practical bases have been built with key national industries and enterprises. Some colleges and universities have formulated professional talents cultivation planning with enterprises. It customize specialized personnel, such as Northeast Electric Power University and enterprise cooperation to establish a China-Guangzhou Nuclear Class, it trains professionals people for industry.

**Innovation Incentive**

Many colleges and universities have launched innovation and Entrepreneurship Program competitions, offered innovation and entrepreneurship courses, established student innovation centers, university-enterprise joint training bases, and the government and universities jointly held various types of professional entrepreneurship competitions, such as accounting innovation and entrepreneurship competition, business plan competition. The consciousness of innovation and entrepreneurship of student has sprouted in practice, and their potential of innovation and entrepreneurship has been stimulated by the opportunities of enterprise projects and self-employment. Encouraging students to start their own businesses, such as the "hungry" internet service platform created by the students of Shanghai Jiaotong University, students transform a strong sense of innovation into effective entrepreneurial behavior, and it makes greater contributions to society. At present, "hungry" online takeout platform covers 2,000 cities, having 2 million restaurants, and 260 million users, it provides a large number of jobs.

Innovation incubation has been promoted to innovative bases and innovative guidance activities, such as National University Science and Technology Parks, the students can register enterprises, and it provides preferential support to policies. A perfect innovation and entrepreneurship incubation support system has been constructed by innovative incubation. The potential of innovation and Entrepreneurship of students have been brought into full play.

**Summary**

It is constructed that a comprehensive training system of innovative and entrepreneurial talents is based on information literacy. A training mechanism of innovative and entrepreneurial talents is build. It is important contents of training innovative and entrepreneurial talents in China. It solves the problem of derailment between theory and practical application in Colleges and universities, and the problem of poor practical ability and weak innovative consciousness of students, and it is helpful to training talents.

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**References**


