



# Research on Innovation and Entrepreneurship Education of College Students Driven by Competition

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**Abstract:** College students' competition is a mass scientific and technological activity for college students. It is an important content of practical teaching in colleges and universities. The fundamental goal of innovation and entrepreneurship education and teaching is to systematically cultivate students' innovation and entrepreneurship consciousness, thinking methods and practical ability, which is the new requirement of the development of the times for traditional education and teaching, and the inevitable direction of higher education teaching reform and development. In recent years, college teachers and students participate in and implement national, provincial and university level projects related to innovation and entrepreneurship education, mainly including college students' innovation and entrepreneurship training plan project, Ministry of education industry university cooperation collaborative education project, innovation and entrepreneurship education reform project, etc. It is an effective means to improve students' comprehensive quality and cultivate their innovative spirit, practical ability and creative ability. The purpose is to promote the reform of college curriculum system and teaching content, encourage college students to study actively, expand their knowledge, improve their practical ability and innovation ability, and cultivate their professional ability and comprehensive quality. Therefore, subject competition is a more direct way to help college students develop the ability of innovation and entrepreneurship.

**Keywords:** Vocational Colleges, Innovation and Entrepreneurship Education, Competition

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## 1. Introduction

College students' competition is a mass scientific and technological activity for college students. It is an important content of practical teaching in colleges and universities. It is an effective means to improve students' comprehensive quality and cultivate their innovative spirit, practical ability and creative ability. The purpose is to promote the reform of college curriculum system and teaching content, encourage college students to study actively, expand their knowledge, improve their practical ability and innovation ability, and cultivate their professional ability and comprehensive quality [1]. Therefore, subject competition is a more direct way to help college students develop the ability of innovation and entrepreneurship. In the opinion on vigorously promoting innovation and entrepreneurship education in colleges and universities and the work of independent entrepreneurship of college students, the Ministry of Education pointed out that "innovation and entrepreneurship education is a teaching concept and model which is adapted to the needs of economic society and national

development strategy [2]. It is of great practical and long-term strategic significance to promote innovation and entrepreneurship education in colleges and universities, which is of great practical significance and long-term strategic significance for promoting the scientific development of higher education, deepening the reform of education and teaching and improving the quality of talent training.

Innovation and entrepreneurship education should be oriented to all students and integrated into the whole process of talent training. On the basis of professional education, we should take the transformation of educational thought and the renewal of educational concept as the guide, take the promotion of students' sense of social responsibility, innovative spirit, entrepreneurship awareness and entrepreneurial ability as the core, and focus on the reform of talent training mode and curriculum system, vigorously promote the innovation and entrepreneurship education in colleges and universities and constantly improve the quality of talent training. Innovation and entrepreneurship education is an important way to deepen the teaching reform of higher

education and cultivate students' innovative spirit and practical ability. It is an important measure to promote employment by entrepreneurship and promote full employment of college graduates. College students' competition is an important carrier of cultivating students' innovative spirit and practical ability. It plays an important role in improving the innovation ability, analyzing problems and solving practical problems and cultivating team cooperation spirit, and is of great significance to promote the long-term and effective development of subject competition. According to the results of the training of innovative talents and the evaluation of subject competition in Chinese universities, the competition has greatly improved the comprehensive quality of college students' innovation and entrepreneurship ability. In this context, colleges and universities pay more attention to the construction and improvement of competition organization system and venue equipment, promote the development of discipline competition and improve the innovation and entrepreneurship ability of college students [3]. The purpose of this research is to investigate the innovation and entrepreneurship education of college students driven by competition and improve their abilities of the innovation and entrepreneurship.

## 2. An Overview of College Students' Innovation and Entrepreneurship Related Projects and Competitions

In recent years, college teachers and students participate in and implement national, provincial and university level projects related to innovation and entrepreneurship education, mainly including college students' innovation and entrepreneurship training plan project, Ministry of education industry university cooperation collaborative education project, innovation and entrepreneurship education reform project, etc [4].

Among them, the National College Students' Innovation and Entrepreneurship Training Program projects need to be under the guidance of the instructor (team), with the student innovation and entrepreneurship team as the main body to declare and implement the project. The content of the project comprehensively covers the formation of college students' innovation and entrepreneurship ideas - project planning - project practice - products and achievements - promotion and transformation and other processes. The Ministry of Education industry university cooperation collaborative education project includes innovation and entrepreneurship education reform project, innovation and entrepreneurship joint fund project, teaching content and curriculum system reform, practice conditions and practice base construction, new engineering construction project, teacher training and other sub projects, which provides a strong guarantee for the implementation of innovation and entrepreneurship education in colleges and universities. Innovation and entrepreneurship education reform projects in colleges and universities mainly include innovation and entrepreneurship education reform demonstration school, innovation and entrepreneurship

education pilot reform specialty, innovation and entrepreneurship education teaching team, innovation and entrepreneurship education reform research, innovation and entrepreneurship education MOOC and other sub projects, which comprehensively promote the deep integration of innovation and entrepreneurship education and professional education in Colleges and universities, We should constantly promote the improvement of college students' innovation and entrepreneurship ability and practice level. In addition, in the process of research and practice of innovation and entrepreneurship education, the number of innovation and entrepreneurship application-oriented scientific research projects carried out by university teachers is also increasing.

These projects provide high-quality platform, capital and service guarantee for the cultivation of college students' innovation and entrepreneurship ability, which can effectively promote the improvement of college students' innovation and entrepreneurship ability [5].

In recent years, the "Internet plus" college students' innovation and entrepreneurship competition, "youth entrepreneurship" national entrepreneurship competition, and Challenge Cup National extracurricular academic competition in science and technology competition have all the characteristics of innovation and entrepreneurship, clear interdisciplinary integration, more open and bright guidance, and outstanding training of college students' comprehensive knowledge and skills. The ability to creatively solve practical application problems and connect and transform achievements with social needs. Under the background of artificial intelligence and big data research and application becoming hot spots, "National Undergraduate robot Competition", "National Undergraduate Information Security Competition", "China Software Cup" undergraduate software design competition and other competitions "also go beyond the scope of single discipline competitions. These competitions are sponsored by relevant teaching steering committees, professional associations and industry associations of the Ministry of Education. It is organized by universities or enterprises and co-sponsored by enterprises. Through the competition results display, innovation and entrepreneurship forum and other forms, we can effectively promote the cooperation of government, industry, university and research, the integration of industry and education, the docking of technology and capital, and the promotion and transformation of achievements [6].

## 3. The Driving Effect of Competition on College Students' Innovation and Entrepreneurship Ability

### 3.1. Broaden the Vision of Innovation and Entrepreneurship, and Strengthen the Awareness of Innovation and Entrepreneurship

First of all, college students' innovation and entrepreneurship projects and competition projects can be

closely linked with the discipline frontier, industry dynamics and social needs. These projects and competitions provide college teachers and students with a window and a broad vision to understand the social needs of innovation and entrepreneurship. Secondly, through the implementation of a certain number of high-quality projects and competitions, a number of innovation and entrepreneurship achievements have been accumulated, and these achievements have been transformed into an important part of professional education and teaching content, completing the transformation from only some teachers and students participating in innovation and entrepreneurship education teaching practice to driving most teachers and students to participate in the situation together. Through the campus network platform, campus broadcast, campus bulletin board and cultural wall, we report and publicize the experience and achievements of college students' innovation and entrepreneurship projects and competitions, as well as the innovation and entrepreneurship deeds of teachers and students, creating a strong campus innovation and entrepreneurship cultural atmosphere, and gradually strengthening the innovation and entrepreneurship awareness of teachers and students [7].

### ***3.2. Improve Students' Innovation and Entrepreneurship Skills and Develop Innovative and Entrepreneurial Thinking Methods***

(1) The whole process of project selection, application, implementation, achievement promotion and transformation, the preparation, training, students' innovative practice, competition and other activities requires teachers and students to deeply understand the frontier of discipline and professional development, closely contact with social needs, and find out the goal of innovation and entrepreneurship. (2) It can cultivate students' ability of consulting advanced research and development achievements in related fields at home and abroad. (3) In the stage of project implementation or open competition, teachers and students can discuss and solve problems together, constantly learn new knowledge, integrate and synthesize multidisciplinary knowledge, and deeply explore and practice frontier knowledge and skills. (4) Let the students experience the sense of acquisition and achievement brought by the innovation process and achievements, acquire the ability and motivation to learn new knowledge and explore the unknown, and develop the habit of inquiry learning, as well as the systematic thinking method of innovation and entrepreneurship.

### ***3.3. Promote, Form and Optimize the Innovation and Entrepreneurship Talent Training Program and Curriculum System***

Innovation and entrepreneurship education and teaching need to be deeply integrated with professional education and teaching. The key to cultivate innovative and entrepreneurial talents is to continuously optimize and improve the professional talent training program and curriculum system,

and to deeply integrate innovative and entrepreneurial thinking methods, teaching and practice contents. First, colleges and universities can take innovation and entrepreneurship projects and competitions as breakthrough points to drive most teachers and students to participate in them, truly realize the cooperation of production, teaching and research, form and accumulate a number of achievements, promote qualitative change by quantitative change, and truly infiltrate innovation and entrepreneurship ideas, teaching modes and knowledge skills into daily teaching activities. Second, innovation and entrepreneurship projects and competitions attract a large number of well-known enterprises and universities to participate. Through the preparation, implementation, application and promotion of these projects and competitions, teachers and students can have the opportunity to participate in the R & D process of enterprises, which can effectively promote the teaching content of innovation and entrepreneurship education in colleges and universities, and truly realize the deep integration of "production, teaching and research". Third, the implementation of innovation and entrepreneurship projects and competitions provides a good opportunity for colleges and universities to communicate and interact with enterprises and practical departments. Colleges and universities can jointly formulate talent training programs and curriculum systems with enterprises and practical departments to meet the needs of innovation and entrepreneurship talent training [8].

### ***3.4. Promote the Improvement of Teachers' Level and the Formation of Student Team***

Teachers need to change the traditional education and teaching ideas and models, improve teaching methods, update teaching content, and have the ability of innovation and entrepreneurship tutors. First of all, while guiding students to complete innovation and entrepreneurship projects and competition topics, teachers can accumulate a large number of teaching materials and obtain new teaching experience. Secondly, teachers can participate in special innovation and entrepreneurship education and teaching training (such as the teacher training project of the Ministry of Education's Industry University Cooperation Cooperative Education Project) to improve their own innovation and entrepreneurship education and teaching level. Thirdly, teachers can improve their teaching ability of innovation and entrepreneurship education by participating in the research and implementation of the "teaching content and curriculum system reform" in the Ministry of Education's industry university cooperative education project, the "innovation and entrepreneurship education team", "innovation and entrepreneurship reform research", "innovation and entrepreneurship education MOOC" and other sub projects in the university innovation and entrepreneurship education reform project. In the implementation process of projects and competitions, senior and junior students form project R & D teams and student associations, which can give full play to the role of "mentoring", attract and drive a large number of

students to join professional associations, and carry out long-term innovation and entrepreneurship practice training and skill training [9].

## 4. Innovation and Entrepreneurship Education of College Students Driven by Competition

### 4.1. Highlight Students' Interests and Hobbies

The potential and creativity of students are limitless. It is very important to keep open academic thoughts and broad academic vision. The core of "National College Students' Innovation and Entrepreneurship Training Program" is "innovation". The project selection should be different from the traditional subject design based on professional knowledge and graduation thesis. It must have innovative highlights and practical training process, which can truly reflect students' interests and "fantastic ideas" [10].

Due to the inertia of professional education for a long time, it is difficult for university teachers and administrators to get rid of the influence of discipline and professional paradigm. In the process of organizing undergraduates to carry out scientific research activities, they consciously or unconsciously operate according to the existing thinking set and research mode, which does not reflect the cultivation of Undergraduates' innovative spirit, and seriously separates theory from practice. Therefore, in the process of application and implementation of college students' innovation and entrepreneurship projects, we should adhere to the principle of student-centered, innovation oriented and interest oriented, encourage students to be innovative, and let students dare to think, dare to do, be able to write and speak, so as to stimulate students' interest in learning, give full play to their creative potential and cultivate their innovative spirit and entrepreneurial ability, make students' knowledge internalized into quality and externalized into ability.

### 4.2. Change the Concept of Education

At present, China's university education still follows the traditional teaching mode, and teachers mainly teach knowledge, without understanding the important connotation of entrepreneurship education. Many teachers understand that entrepreneurship is simply to improve students' practical innovation ability, which is very limited, leading to students' lack of innovation and entrepreneurship consciousness and innovation and entrepreneurship concept, which to some extent exposed the drawbacks of school education mode. Therefore, the major colleges and universities are facing the important task is to combine the modern education concept, innovate the backward teaching mode at this stage, constantly change the education concept, and cultivate the students' innovation and entrepreneurship consciousness as the starting point. The upsurge of college students' innovation and entrepreneurship puts forward higher requirements for colleges and universities. Colleges and universities must be

committed to the setting of innovation and entrepreneurship education curriculum. Only if the teaching scheme is successful, the classroom effect will be better, and students can better grasp the essence of the curriculum.

### 4.3. Improve the Quality of Teachers

The quality of teachers needs to be further improved. Teachers play the role of guidance. Therefore, they must have professional professional ability and teaching ability. Therefore, today's society puts forward higher requirements for teachers. Teachers must constantly learn, strive to improve their own quality, constantly change their ideas, learn excellent teaching experience and achievements, and create a scientific teaching mode according to the actual teaching environment. The quality of teachers is very important, colleges and universities should also actively take various measures to provide teachers with more learning and communication opportunities, broaden their horizons and increase their knowledge. For example, hold regular exchange meetings, invite successful experts and entrepreneurs to teach their own successful experience, and let teachers communicate and learn with them face to face, so that they can keep up with the pace of the times, master the latest entrepreneurial resources, and apply them to future teaching. Then teachers will share what they have heard and learned with students, and imperceptibly cultivate students' awareness of innovation and entrepreneurship. Therefore, teachers should always pay attention to the improvement of their own quality, innovate teaching mode, change teaching ideas, and influence students imperceptibly.

## 5. Implementation Strategy of Innovation and Entrepreneurship Education for College Students

### 5.1. Strengthen Ideological Propaganda and Establish a New Concept of Innovation and Entrepreneurship Education

The cultivation of college students' scientific research and innovation ability is conducive to the development of scientific research in colleges and universities. Therefore, colleges and universities should focus on the cultivation of college students' scientific research and innovation ability. Through the regular organization of college students' innovation and entrepreneurship education seminars, let students understand the new situation and new problems of innovation and entrepreneurship education. In the seminar on innovation and entrepreneurship education for college students, colleges and universities should invite well-known experts at home and abroad to give correct guidance to college students, and put forward solutions to help college students establish self-confidence in innovation and entrepreneurship, and enhance their sense of responsibility and mission in innovation and entrepreneurship. At the same time, we should strengthen the construction of

counselor team, strengthen counselors' learning of new theories and new experiences, actively organize college students to carry out training and discussion activities, enhance college students' innovation and entrepreneurship ability, seize all entrepreneurial opportunities, and establish a new concept of national innovation and entrepreneurship education.

### ***5.2. School College Linkage, Top Level Design of Competition***

The school should attach great importance to the competition work, ensure the competition order, the quality of the competition and support for the key events. The school should design the top level of the competition and implement the hierarchical classification management. The Department of Education affairs and the school of innovation and entrepreneurship education attach great importance to the organization and participation of college students' innovation and entrepreneurship education and various competition activities, and give strong support in policy and funds. In order to ensure the competition order, competition quality and support for key events, the top level design of the school implements hierarchical and classified management of competitions, issues a number of management documents, and constructs the competition organization system of two levels linkage disciplines: the school is responsible for the formulation and coordination of competition system, the college is responsible for the specific organization and management of competition, and the whole school works together, Form a mechanism of combining internal and external innovation practice with discipline competition, and timely release new trends and requirements of the competition. Through top-level design, it ensures the competition to produce excellent products and benefits, greatly improving the quality and influence of the competition.

### ***5.3. Strengthen the Construction of Competition Guidance Team***

First of all, competition is an important platform for college students to comprehensively use their professional knowledge to solve practical problems and realize the transformation from theory to practice. It is one of the main carriers to improve college students' innovation ability and an effective way to cultivate innovative talents. It is one of the important contents of teaching reform in colleges and universities to promote the practice teaching reform guided by subject competition. In view of the problems existing in the practice teaching in colleges and universities, taking the subject competition as an opportunity, the subject competition is closely combined with the experimental teaching content, and the subject competition is closely combined with the talent training scheme, so as to promote the practice teaching reform of automation specialty and improve the innovation ability of students. Secondly, colleges and universities should strengthen the training support for the

participating teams. Thirdly, colleges and universities should set up a team of professional instructors. Finally, strengthen the establishment of professional student organizations.

### ***5.4. Give Full Play to the Role of Resource Guarantee and Build a Platform for Discipline Competition***

The school integrates the advantages of school resources, builds four platforms to provide security, and builds a platform for instructors. Adhere to the strategy of "inviting in and going out", invite experts from outside the school to train and organize teachers to go out to participate in exchanges, and improve teachers' ability to guide the competition. Build competition experiment platform, strengthen the construction of innovative laboratory, and further increase the opening of laboratory. Actively undertake provincial and national competition projects. This not only provides a platform for college students to participate in the competition, but also provides a stage for college students to participate in innovation and entrepreneurship activities; Actively organize students to participate in national and provincial discipline competitions. Such as "Internet plus" competition and innovation competition and "Challenge Cup". Actively hold basic disciplines and skills competitions involving multiple majors and wide participation. Such as school level mathematics competition, physics experiment competition, chemistry experiment competition, English competition, etc. Build a platform for scientific and technological innovation. By encouraging teachers to attract undergraduates to participate in scientific research projects, opening various innovation laboratories and innovation platforms, the university improves the ability to guarantee the conditions for competitions in various disciplines, guides students to track the new progress of disciplines, and cultivates students' innovative spirit and practical ability.

### ***5.5. Strengthen the Management of Discipline Competition Training System***

From the perspective of the main body of competition training, it is mainly led by colleges and universities, assisted by competition organizers and assisted by student organizations. First of all, colleges and universities should pay attention to the competition training system, according to the development of university discipline competition and the participation of college students, formulate the corresponding perfect training system. Secondly, the organizer of the competition trains and transports the software maintenance personnel and technical personnel of the practical competition for colleges and universities, ensures the fluency and stability of the competition server, and provides a good competition software training environment for the participating students; At the same time, we should also strengthen exchanges and cooperation with colleges and universities, and work together to make suggestions for the discipline competition training management system. Finally,

student organizations should set up special competition guidance and training organizations, such as think tanks, academic competition associations, etc.

### 5.6. Strengthen the Management System of Subject Competition

Improving the management of subject competition is an important guarantee for cultivating innovative talents. First of all, colleges and universities should strengthen the consciousness of subject competition, improve the management department of subject competition, improve the consciousness of teachers and college students, bring the subject competition system into the teaching system planning, encourage more college students to participate in subject competition activities and teachers to guide students to participate. Secondly, make reasonable rules and regulations of subject competition. Finally, we should strengthen the publicity of subject competition, innovate the publicity methods of subject competition, and expand the publicity channels of subject competition.

## 6. Summary

The fundamental goal of innovation and entrepreneurship education and teaching is to systematically cultivate students' innovation and entrepreneurship consciousness, thinking methods and practical ability, which is the new requirement of the development of the times for traditional education and teaching, and the inevitable direction of higher education teaching reform and development. Taking the in-depth development and implementation of college students' innovation and entrepreneurship competition as the breakthrough, starting point and driving force, it is an optional path to promote the deepening reform of college students' innovation and entrepreneurship education and teaching to effectively realize the deep integration of college students' innovation and entrepreneurship project and competition and professional education and teaching, and to run the project, competition process and results through the whole process of talent training.

## Conflicts of Interest

The author declares that he has no competing interest.

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