

Research and Exploration on Cultivation Mode of Innovation Ability of College Students Based on the Integration of Innovation and Entrepreneurship Competition and Dual-innovation Courses

Li Li

School of Information Science and Engineering
Chengdu University
Chengdu, China

Xiujun Zhang

School of Information Science and Engineering
Chengdu University
Chengdu, China

Musong Gu

School of Information Science and Engineering
Chengdu University
Chengdu, China

Abstract—The paper puts forward the significance of carrying out innovation and entrepreneurship education; states the importance and significance of innovation and entrepreneurship competition in cultivating the independent innovation ability of college students; analyzes some practical existing problems in the teaching process of innovation and entrepreneurship education; proposes a statement of relying on entrepreneurship and innovation discipline competition and constructs a new teaching mode of entrepreneurship and innovation courses, entrepreneurship of college students and carries out theoretical research and teaching practice on innovation and entrepreneurship education in colleges and universities, which enables to explore a new development path by cultivating practical ability of innovation.

Keywords—innovation and entrepreneurship competition; dual-innovation courses; innovation ability; cultivation mode

I. INTRODUCTION

What is the ultimate goal of setting up an innovative entrepreneurship course (referred to as a dual-creation course), and what kind of educational effect should it achieve? For those universities that specialize in entrepreneurship and innovation courses, the main goal is based on the needs of socialist professional development and the realization of the professional innovation talents for the training objectives. Generally the main purposes of this course are to regard enhancing the students' sense of responsibility, spirit, ability, social responsibility and so on for innovation and entrepreneurship as teaching importance, cultivate the basic literacy of college students' dual ability, promote their full awareness, quality, psychology, and ability to start a business, and to develop a positive awareness of positive undergraduate study and professional research. In this way, students own the ability to adapt to modern society and

participate in work and life independently. Therefore, the development of innovation and entrepreneurship must meet the following two points: firstly, from the perspective of the innovation, entrepreneurship, spirit and quality, students should constantly stimulate the innovative courage, vision, organization and coordination skills, and social responsibility from the learning objects, and then make preparations for their active involvement in innovative entrepreneurial activities from the aspects of innovative knowledge and entrepreneurial psychology; secondly, from the perspective of professional skills education, it's needed to focus on training the students' professional knowledge ability and double-innovation theory and practice, and constantly improve their innovation and entrepreneurship theory knowledge and practice ability.

II. ANALYSIS ON INNOVATION AND ENTREPRENEURSHIP COMPETITION FUNCTION

Innovative and entrepreneurial competitions in colleges and universities, as an important platform for cultivating college students' essential theoretical and practical activities, is not only the significant practical means for the university's innovative experimental projects to effectively apply the double-creation theory to achieve the transformation of achievements, but also a booster for universities to enhance their innovation and entrepreneurship ability independently. For the continuous improvement of independent innovation consciousness and entrepreneurial practice ability of the college students, the basic functions of the innovation and entrepreneurship competitions are mainly reflected in the following three main aspects:

A. *Training and Cultivating Innovative Consciousness and Thinking of College Students*

There are many types of programs in the discipline competition. For example, there are some highly specialized professional discipline competitions (such as the National College Student ACM Programming Competition, the College Students Mathematical Modeling Competition, etc.), and some comprehensive innovation and entrepreneurship competitions (for example: China "Internet+" College Students Innovation and Entrepreneurship Competition, "Challenge Cup" Chinese College Students Business Plan Competition, etc.). College students must have a strong innovative thinking ability if they want to participate in these competitions smoothly, and look forward to achieving better competition results. In the process of students participating in these double-creation competitions, college students should not only read and understand some award-winning works in previous competitions carefully, but also, more importantly, re-determine the direction of setting up the topic from different knowledge perspectives and different directions by making innovations and innovations different from previous competitions. The China "Internet+" College Students Innovation and Entrepreneurship Competition is taken for example: the engineering and technical majors participated in the obvious professional advantages respectively in terms of professional skills and professional application. The main reason is that they have innovative professional characteristics based on their own technological innovation and invention patents.

B. *Developing and Stimulating the Enthusiasm and Interest in Active Participation in Learning*

In addition to the need to master the teaching theory knowledge of the double innovative classroom, students need to expand the latest academic research in the field of their own specialty, and may even need to take the initiative to further study and master the relevant knowledge content besides their own specialty. In the process of actively completing the participating in the entrepreneurship and innovation competition, the potential requirements of the dual-creation competition for its knowledge content and the "sense of mission" of completing the entries will greatly stimulate the enthusiasm and interest of the students to actively participate in learning. For example, a competition project of a college entrepreneurial program requires forming a team of students with different professional technical backgrounds to complete. The professional team members responsible for the technical operation of the project need to fully understand the professional knowledge of marketing, and the professional team members responsible for the financial management of the project need to be full. As a team project leader, we need to fully understand the relevant professional knowledge of information technology, marketing, personnel management, financial management, policies and regulations. These learning needs not only effectively strengthen the relevant specialties of college students themselves. The basic theoretical knowledge of the industry also effectively cultivates and fully stimulates the enthusiasm and interest of college students to actively

participate in learning professional knowledge in different fields.

C. *Cultivating the Sense of Teamwork and Improving Organizational Coordination Among Students*

The works participating in the entrepreneurship and innovation competition must be completed in the form of team competitions, which requires college students to have a strong sense of teamwork when signing up for various types of competitions. As the major members in the professional team, at the beginning of the establishment of the team, students may find that they are not very familiar with each other, and there will be great differences in professional knowledge, ways of thought expressions and personality traits. During the whole process of organizing and completing the entries, team members should fully learn to communicate with each other and cooperate closely. Each student should have a clear division of labor and perform his or her duties. Besides, in addition to the effective integration of internal resources, the participating players also need to actively make full use of all other social resources that can be fully utilized to create convenient conditions for the early completion of their entries. So the double-creative competition plays an important role in promoting the overall teamwork sense and the overall organization and coordination ability of college students, and is as well as an essential development platform and effective means to promote the overall comprehensive ability of college students.

III. ANALYSIS ON THE STATUS QUO OF THE TEACHING MODE FOR INNOVATION AND ENTREPRENEURSHIP COURSE

At present, the curriculum teaching mode in colleges and universities is basically only to set up the entrepreneurship and innovation course as a professional elective course or public elective course. The total number of students participating in the course is limited, and many colleges and universities do not offer professional compulsory courses, which mean the lack of the characteristic courses of professional innovative entrepreneur closely related to students' professional development, and the huge differences they do not fully take into account in the knowledge and ability structure of each major. In the whole process of organizing and completing the entries in the classroom teaching method, the team members should fully learn to communicate with each other and cooperate closely. Each participating student must have a clear division of labor and perform their respective duties. In terms of teaching arrangement, there is a phenomenon of emphasizing teaching theory over curriculum practice, and the teaching method of classroom teaching is outdated, which fails to make full use of teaching methods such as interactive classroom teaching, interactive simulation in the situation and comprehensive analysis of typical teaching cases. The number of entrepreneurship and innovation courses is small, while the degree of course teaching resources sharing is low; and some "innovative" excellent courses are not worthy of the name. The quality and teaching effect of many excellent courses are

also not ideal enough. They are especially performing in the following aspects:

A. *Classroom Teaching Methods Are Too Outdated*

After entering the university, the students' independent thinking ability and their understanding of the basic theory have been greatly improved; however, students have few opportunities for innovation and entrepreneurship. Teachers are still adopting a traditional education and teaching method, that is, the "teacher speaks while students listening" education model, which makes many students lose interest and even resent this kind of dual-creation course. Some colleges and universities only take written test examinations for the current entrepreneurship and innovation courses. So students just memorize and deal with things, not to mention the innovation and entrepreneurship.

B. *Course Teaching Content Combination Learning Mode Is Simple*

The teaching subjects of the dual-creation courses in colleges and universities are mostly fixed as a single class. The mode is unified teaching system for each class. The teaching teachers who teach the class are also fixed as experts and scholars who specialize in the study of the education theory of dual-creation talents in China or a well-known expert in a field of a professional discipline, rather than an interdisciplinary or the "practice" with rich experience in innovation and entrepreneurship education. Such an entrepreneurial teaching model will lead many students not to deeply understand the organic integration of innovative entrepreneurship and diversified subject knowledge, but also not deeply understand the innovation and entrepreneurship is particularly important in a spirit of win-win cooperation.

C. *The Strength of the School Faculty Is Seriously Lacking*

As the instructor of the entrepreneurship and innovation theory course and the course organizer and implementer, it is necessary to have solid professional theoretical knowledge and sufficient theoretical and practical experience, but the reality is not satisfactory. Many university teachers tend to systematically theorize their technical guidance and professional comments on college students in specific theoretical courses and practical links, which cannot effectively improve the professional innovation ability of students and the comprehensive quality of entrepreneurship. This traditional teaching model, which is based on teaching theory and lacks rich practical experience, is not effective.

D. *Students Participate in the Entrepreneurship and Innovation Competition Is Low*

In a variety of academic competitions or research activities in colleges and universities, only a small number of students who are more excellent or active in activities can usually participate. For most of the students in the school, participating in various types of innovation and entrepreneurship competitions and activities in the school is just an empty talk, while students who do not participate in the school's entrepreneurship and innovation training

activities are facing many difficulties in the school's dual-initiative activity plan. It will be easy to choose to voluntarily give up, and many entrepreneurial projects will be forced to shelve.

IV. REFORMING THE TEACHING MODE OF INNOVATION AND ENTREPRENEURSHIP COURSE BASED ON DOUBLE CREATION COMPETITION PLATFORM

A. *Clarifying the Teaching Objectives of the Curriculum, Constructing a Scientific and Diversified Curriculum Teaching Model, and Realizing the Sharing of Teaching Resources in Higher Education*

Universities should strengthen the construction of the faculty system for dual-creation education, and develop into a professional faculty for entrepreneurship and innovation education. Besides, universities and entrepreneurial teachers should promptly formulate clear teaching objectives for dual-innovation courses-strive to cultivate college students' independent innovation and entrepreneurship spirit and their entrepreneurial innovation qualities, and then transform the innovative employment concept and entrepreneurial value of majority of students. In the classroom teaching dual-innovation courses, it is necessary to make full use of the new teaching theory and methods. In addition to the traditional case teaching and interactive analysis of teaching cases, universities must try to adopt the various-projects teaching form completed by students and sub-groups combined with simulation teaching, letting more students actively participate in every key aspect of the curriculum. Because colleges and universities' dual-curricular courses have typical cross-professional integration characteristics, colleges and universities must focus on the latest entrepreneurial education themes to carry out relevant professional elective courses. Based on this, the specific teaching pattern of dual-innovation courses could be taught interactively by colleges and universities. The combination of college network course teaching mode, the use of powerful college network course teaching resource library, the sharing of high-quality course teaching resources could form a multilevel, three-dimensional college innovation and entrepreneurship course teaching mode.

B. *Hierarchical Curriculum Sets All the Entrepreneurship and Innovation Courses, and Divides the Content Module of the Dual-education Education Courses*

At present, the colleges and universities carry out self-study education of innovative and entrepreneurial courses in the form of elective courses and compulsory courses. However, they all have become the top priority of the innovation and entrepreneurship curriculum education in colleges and universities about in which semester or stage to open the entrepreneurial course elective course, at which semester or stage to open a compulsory entrepreneurship course, how each should be directed at teaching and how the main body is mutually balanced. Therefore, universities must be realistic that they do not have the so-called distinction in the content of the course, that is, to design at a level. Firstly, universities should divide the basic course content into three

teaching modules for integration in order to coping with the comprehensively integrate the basic theory, teaching method application skills and relevant practical skills of college professional dual-education education courses: at first, universities should actively organize all kinds of college students' innovative and entrepreneurial education curriculum teaching modules (including the basic theory of innovation and entrepreneurship) for all students in the school, and open them as compulsory courses for colleges and universities, popularize the basic knowledge of students related majors, and inspire students innovate undertaking awareness and guide students in school to form new core values of innovation and entrepreneurship; secondly, universities should actively carry out the knowledge expansion professional course teaching module that combines the basic courses of innovative technology entrepreneurship practice education with the professional courses of colleges and universities, and integrate the basic knowledge and innovation ability of colleges and universities into the practical teaching practice of college professional courses, having different professional knowledge structure of students further study to master new entrepreneurial skills; thirdly, university should actively organize students and implement the experience and practice teaching courses of innovation and entrepreneurship practice education in colleges and universities, and promote experiential practice teaching.

C. Strengthening the Construction of the Faculty Team System of Colleges and Universities, and Developing into a Professional Innovation and Entrepreneurship Course Faculty Team

Colleges and universities can not only train some outstanding entrepreneurs with rich practical experience, experts and scholars in related fields, and graduates who successfully participate in innovation and entrepreneurship as backbone teachers of University double-venture education, but also focus on supporting the training of some university-related sciences with a certain spirit of innovation and entrepreneurship. Key teachers of disciplines and specialties, learning and strengthening advanced innovation and entrepreneurship theory abroad, etc. should be the teaching methods of teachers' training that universities can choose. In this way, universities could continuously improve the professional teaching management level of the teachers in the professional learning and practice, and provide practical and practical industrial entrepreneurship guidance for the students in the school. The comprehensive application of social entrepreneurship training team in teaching could not only effectively cultivate the cooperation consciousness of college students' entrepreneurial team and improve the ability of promoting college students' innovation and entrepreneurship, but also can effectively guarantee the various interactions of classroom teaching and teacher and student learning. The team of innovative and entrepreneurial teachers is composed by professional teachers and students in universities. As a new development trend of the curriculum reform of curriculum teaching mode, this diversified university innovation and entrepreneurship team

curriculum overall teaching mode has greatly enhanced the comprehensive practice of curriculum teaching.

D. Enriching the Practice Education Activities of the Dual-invasive Theme, Improving the Introduction of Incentives to Participate in the Incentive Mechanism, and Creating a Good Atmosphere for Promoting Dual-creation Practice

As a practical activity and a more important educational effect, the school teachers should organize and have competitions at school-level and above, and integrate their professional knowledge and technological innovation to carry out entrepreneurship skills education. They should actively participate in national key scientific research projects and key national curriculum reform topics. And through various colleges and universities, the competition and scientific research activities have exercised the practical innovation ability of college students' science and technology entrepreneurship activities. Besides, through evaluation, establish a model, commend advanced, they should create a good university campus science and technology innovation and academic exchange atmosphere. And it is necessary to incorporate the award-winning achievements of college students in various types of entrepreneurship and innovation competition activities into the comprehensive ability assessment and school scholarship assessment work regulations, and gradually study and establish and accelerate the improvement of the talent training evaluation standard system required by large-scale technology enterprises.

V. CONSTRUCTING AN INTERACTIVE MODE OF INNOVATION AND ENTREPRENEURSHIP COMPETITION AND DUAL-INVASIVE CURRICULUM TO CULTIVATE COLLEGE STUDENTS' INNOVATIVE ABILITY

By encouraging and guiding students to participate in the entrepreneurship and innovation competition, universities construct and actively practice the interactive teaching mode of "classroom teaching-disciplinary competition-scientific and technological innovation". This teaching mode helps the school students not only to fully utilize the basic knowledge and skills required to study and solve practical problems, but also to own the ability to actively learn new basic knowledge and subject technology, etc. Besides, this mode also enables students to study and solve new problems in the cross disciplinary technique in the process of dual-creation competition, and continuously strengthens to develop the innovative ability and improve students' comprehensive practice ability of self-employment. The classroom interactive teaching mode of "classroom teaching-disciplinary competition-scientific innovation" is to take the classroom teaching students as the main body of the activity, and the competition is combined with the students' independent innovation activities to build a teaching environment that fully values the students' practical activities and independent innovation ability. This mode also should promote classroom teaching reform with the dual-creation competition as the carrier, and actively carry out various scientific and technological innovation activities to cultivate students' comprehensive quality. The results of classroom

teaching and teacher-student dual-creation competition are mainly reflected in the fact that students' independent technological innovation ability can be greatly improved, and ultimately can be directly transformed into more specific technological innovation and application products. Classroom teaching, dual-creation competition and school scientific and technological achievements innovation, where the three complement with each other, should promote development together, build a comprehensive and three-dimensional discipline training model, optimize students' comprehensive knowledge literacy structure, improve students' comprehensive ability and quality and then enhance the ability of independent innovation and social practice.

VI. CONCLUSION

The entrepreneurship and innovation competition is an important mean to continuously improve the ability of students' practical activities, and a significant teaching method to cultivate students' independent innovation ability. Universities should take the entrepreneurship and innovation competition as the teaching carrier, promoting the teaching reform, improving the teaching content of the subject practice activities, and cultivating the students' independent innovation activities. Besides, universities also should continue to attach great importance to the organization of the entrepreneurship and innovation competition, promote the reform of teaching reform and the teaching of subject curriculum, strive to continuously enhance sense of independent innovation of students, improve their ability of practice and innovation, and cultivate a group of new generation of professionals with strong practical innovation ability, strong innovation ability and high core comprehensive competitiveness.

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