



# Exploration and Construction of Evaluation System for Innovation and Entrepreneurship Education Course Construction in Colleges and Universities

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**Abstract.** Under the background of “mass entrepreneurship and innovation”, Chinese colleges and universities have carried out innovation and entrepreneurship education for college students, innovation and entrepreneurship education not only conforms to the development trend of the times, but also meets the needs of talents in the new era, but the development of innovation and entrepreneurship education is a long-term and arduous task, requiring the cooperation of the government, society, schools and other parties, and the innovation and entrepreneurship education course evaluation system as an important part of the application-oriented undergraduate talent training model, for the current innovation and entrepreneurship education course evaluation common lack of evaluation awareness. In accordance with the needs of social and economic development, the content of innovation and entrepreneurship education course evaluation is clarified through investigation and analysis, and then the evaluation elements are continuously refined and the structure of course evaluation is optimized, and the evaluation system design is strengthened to improve the function of course evaluation, so as to continuously improve the ability of college teaching to serve the society.

**Keywords:** animation course · animation education · intelligent classroom · intelligent teaching

## 1 Introduction

The construction of the evaluation system of the innovation and entrepreneurship education curriculum construction in colleges and universities is the key to the current innovation and entrepreneurship education curriculum construction in colleges and universities. In order to better serve the society, this paper systematically combs out the construction indicators of the innovation and entrepreneurship evaluation system by refining the evaluation indicators, strengthening the design of the evaluation system, and creating conditions for the benign development of the innovation and entrepreneurship education curriculum in colleges and universities.

## **2 The Current Situation and Existing Problems of the Construction of Innovation and Entrepreneurship Education Course Evaluation System in Colleges and Universities in China**

### **2.1 Status Quo of Innovation and Entrepreneurship Education Course Evaluation System Construction**

At the end of the 20th century, China began to implement innovation and entrepreneurship education in colleges and universities, and it was introduced by Professor Liyan Xu of Shanghai Jiao Tong University around 1980, and then it developed everywhere in other universities in China [1]. In 1994, China established the China Innovation and Entrepreneurship Society in Shanghai, and soon after that, the Innovation and Entrepreneurship Education Professional Committee was established, and in early 2002, the Department of Higher Education of the Ministry of Education carried out pilot work on entrepreneurship education in 9 colleges and universities across the country. In recent years, the innovation and entrepreneurship education of college students in China has developed rapidly, and the government has actively provided financial support and a series of preferential policies for college students' entrepreneurship projects and local colleges and universities to implement innovation and entrepreneurship education, and entrepreneurship education has entered a stage of diversified development [2].

China's colleges and universities have more than 30 years of development in innovation and entrepreneurship education, but the construction of innovation and entrepreneurship education evaluation system is still relatively insufficient, most universities only pay attention to the results of innovation and entrepreneurship education, and the attention to education quality monitoring is not enough [3]. At present, the evaluation system of innovation and entrepreneurship education in colleges and universities mainly presents the following characteristics: first, it pays attention to the impact of innovation and entrepreneurship education on the social economy, and requires that the evaluation indicators reflect the characteristics of industry development; Second, pay attention to the innovation and entrepreneurship achievements obtained by students, and use students' participation in college students' innovation and entrepreneurship plan training projects, Internet + competitions, innovation and entrepreneurship competitions, and entrepreneurial achievements as evaluation indicators to measure the achievements of innovation and entrepreneurship education; Third, pay attention to the evaluation of the results of innovation and entrepreneurship education, and the design of evaluation indicators lacks relevant indicators for process evaluation [4]. At the same time, it pays attention to immediate feedback on students' employment and entrepreneurship, and lacks continuous follow-up feedback and evaluation. It can be seen that although China's colleges and universities have initially established an innovation and entrepreneurship education evaluation system and carried out effect evaluation, the system design is not comprehensive and systematic, and the detection effect is not comprehensive and sustainable.

### **2.2 Problems in Course Evaluation**

As the carrier of college education and teaching activities, curriculum evaluation is the basic path to achieve education and teaching goals, and its essence lies in exploring

the value that exists, generated and created throughout the curriculum and teaching activities, and to recognize, select and judge, so as to achieve effective improvement and in-depth education [5]. Curriculum evaluation is also a core issue in innovation and entrepreneurship education, but there are still many problems in curriculum construction evaluation.

### **2.2.1 The Evaluation Objectives are not Clear**

The innovation and entrepreneurship of colleges and universities should match the national strategy, social needs and enterprise goals, and colleges and universities need to formulate clear evaluation goals for innovation and entrepreneurship education on the basis of clarifying their own school-running positioning and combining the development characteristics of different majors [6]. However, at present, most colleges and universities do not pay enough attention to this aspect, cannot form a unified innovation and entrepreneurship talent training goal and positioning, and lack a systematic top-level design, and do not form an innovation and entrepreneurship education talent training system integrated into the whole teaching process. Some colleges and universities mainly attach importance to the number of participants and winners of Daiso projects, Internet + competitions, and innovation and entrepreneurship competitions, and only pay attention to practical interests, without targeted innovation and entrepreneurship evaluation target design, nor objectively consider the actual needs of all students for innovation and entrepreneurship education. In addition, universities lack smooth communication channels with industry enterprises, and do not fully consider the organic transformation of social achievements when setting evaluation goals, which will also affect the overall teaching quality of innovation and entrepreneurship education to a certain extent.

### **2.2.2 Evaluation Mechanism is not Comprehensive**

If the innovation and entrepreneurship education in colleges and universities lacks a comprehensive evaluation mechanism, it will lead to a superficial form. Because students' innovative and entrepreneurial practice activities are not limited in colleges and universities, they should be in contact with the society in the whole activity. However, at present, the evaluation mechanism of innovation and entrepreneurship education in colleges and universities in China is not perfect, and the evaluation subject is unitary, lacking the participation of all social strata. In the process of students' innovation and entrepreneurship, they will raise funds to carry out activities through various channels. Because students lack enough social experience, there may be fund use risks and financial risks in the process of using funds, and because the evaluation system is not perfect, without the guidance of industry and enterprise experts, it is difficult for schools to provide evaluation constraints and guidance for students' activities in all aspects, and carry out effective risk early warning analysis for students, which may eventually lead to the failure of students' innovation and entrepreneurship activities.

### **2.2.3 Evaluation Indicators are Incomplete**

The evaluation index of innovation and entrepreneurship education evaluation system design is the important basis and the core content of innovation and entrepreneurship

education evaluation. Determining the scientific and reasonable indexes of the evaluation system of innovation and entrepreneurship education is the prerequisite for the smooth development of the evaluation and monitoring of innovation and entrepreneurship education. Only by scientifically analyzing the data according to the evaluation index can we realize the objective and comprehensive evaluation [7]. However, there are some defects in the design of evaluation indicators in Chinese universities. The evaluation indexes are incomplete, lack of effective quantitative standards or unscientific weight design of evaluation indexes; Pay attention to the internal evaluation of teachers and students, ignoring the whole process evaluation of innovation and entrepreneurship education in schools; Paying attention to the evaluation index design of assessment results, while ignoring the evaluation index design of process assessment and effect feedback, can't fully reflect the evaluation process and realize dynamic monitoring.

### **3 Innovation and Entrepreneurship Education Curriculum Evaluation System Structure**

The construction of curriculum evaluation system is the safeguard measure, measurement standard and feedback mechanism for the full implementation of innovation and entrepreneurship. The construction of curriculum evaluation system should follow the principles of combining quantitative evaluation with qualitative evaluation, formative evaluation with summative evaluation, and diagnostic evaluation with developmental evaluation. We should correctly understand the subject and object of curriculum evaluation, formulate a detailed evaluation index system, use appropriate evaluation methods, grasp the principles of curriculum evaluation and actively promote the construction of curriculum evaluation system.

#### **3.1 Innovation and Entrepreneurship Education Curriculum Evaluation System Construction Needs to Be Results-Oriented Assessment**

Although the policy of innovation and entrepreneurship education in colleges and universities has been continuously developed and deepened, and the degree of college students' participation in innovation and entrepreneurship has gradually increased, and fruitful achievements and progress have been made, we should also be soberly aware that there are still many problems. The achievements of innovation and entrepreneurship are just formalism, or new bottles of old medicine, or copying the innovation and entrepreneurship models of some undergraduate colleges, or failing to really integrate innovation and entrepreneurship education with local enterprise elements, and so on. Therefore, when we set up the evaluation system of innovation and entrepreneurship education, we must conduct quantitative evaluation based on the results, but not on feelings.

#### **3.2 Innovation and Entrepreneurship Education Curriculum Evaluation System Needs to Be Assessed by Qualitative Indicators**

In order to make up for the fact that in the process of innovation and entrepreneurship education assessment, too much attention is paid to the assessment of the results, which

affects the enthusiasm of teachers and students for innovation and entrepreneurship. When constructing the evaluation system of innovation and entrepreneurship education, we should also pay attention to the qualitative index assessment. Conduct a process assessment of the work and investment made by teachers and students in the process of innovation and entrepreneurship education. In the early stage of innovation and entrepreneurship, some students may fail in innovation and entrepreneurship because they lack certain risk identification ability or certain cognitive ability and decision-making leadership ability to the market. Instead of completely denying students' work because there is no result, we should help students to analyze and discover their own ability characteristics, and properly guide them to participate in more practice. Therefore, when evaluating innovation and entrepreneurship education, we should also pay attention to the evaluation of students' innovation and entrepreneurship projects in the implementation process while taking the result assessment as the guide.

### **3.3 Evaluation of Innovation and Entrepreneurship Competition Results**

At present, under the upsurge of "double innovation", various forms of innovation and entrepreneurship competitions emerge one after another. At present, local governments and higher vocational colleges actively encourage teachers and students of higher vocational colleges to participate in innovation and entrepreneurship competitions, and especially give various policy inclinations and encouragement to teachers and students who win the innovation and entrepreneurship competitions. When we carry out the evaluation system of innovation and entrepreneurship education, we should not only affirm the winning projects, but also evaluate the results of the contest in time, and guide them correctly, so as to strive for the incubation of the results.

## **4 Practical Links of Innovation and Entrepreneurship Curriculum Evaluation**

After setting up the evaluation system of innovation and entrepreneurship education courses, colleges and universities should put the evaluation system into practice according to their own actual situation, and constantly improve the evaluation system itself while using the evaluation system to evaluate innovation and entrepreneurship courses.

### **4.1 Clear Evaluation Objectives**

#### **4.1.1 Play an Evaluation-Oriented Role**

When determining the evaluation index, colleges and universities should comprehensively judge whether the concept of innovation and entrepreneurship education in colleges and universities matches the regional economic development, whether the teaching staff of innovation and entrepreneurship education matches the learning needs of students, and whether the curriculum system framework matches. Match the employment needs of the design industry and enterprises. Therefore, we should guide the design of evaluation objectives, so that there is a clear basis for implementing the evaluation

system in colleges and universities. The main goal of innovation and entrepreneurship education in colleges and universities is to cultivate high-quality innovative and entrepreneurial talents. However, due to the differences in levels, school-running ideas, school-running characteristics and management modes among universities, it is necessary to form innovative talents under the guidance of the country's leading development ideas. The specific goal of entrepreneurship education is to enhance the awareness of innovation and entrepreneurship in schools in an all-round way and achieve the goal of improving the quality of innovation and entrepreneurship education.

#### **4.1.2 Strengthen the Top-Level Design, Formulate and Implement Comprehensive Evaluation Methods for Teaching Quality of Innovative and Entrepreneurial Course Teachers**

It is the starting point and the end result of constructing the teaching evaluation system of innovation and entrepreneurship courses to establish innovative and entrepreneurial education courses that meet the needs of the social market and the actual needs of students. In order to ensure the teaching quality of innovative and entrepreneurial education courses, monitor and evaluate the teaching quality of innovative and entrepreneurial teachers, formulate relevant comprehensive evaluation methods of teaching quality, regard the comprehensive evaluation of teaching quality as the internal drive to improve the teaching quality and talent cultivation ability of innovative and entrepreneurial courses, and establish a four-in-one teaching evaluation mechanism of “evaluation, feedback, improvement and promotion”. Through the comprehensive evaluation of teaching quality, the positive incentive-oriented role is highlighted. The comprehensive evaluation of the quality of innovative entrepreneurship courses adheres to the principles of combining classified evaluation with classified guidance, teaching evaluation with class evaluation, quantitative and qualitative evaluation, process evaluation with result evaluation, and highlighting the main position of colleges. The evaluation subjects of leading cadres, supervision evaluation, peer evaluation, student evaluation, college evaluation and teachers' teaching reflection “five evaluations and one reflection” are constructed, which are carried out through online evaluation, random lectures, questionnaires, symposiums and centralized evaluation.

## **4.2 Improve the Evaluation Mechanism**

### **4.2.1 Diversification of Evaluation Subjects**

The evaluation subject of innovative entrepreneurship education should include two parts: internal evaluation subject and external evaluation subject. First of all, schools, teachers and students are the internal evaluation subjects. Schools are responsible for evaluating the standardization of rules and regulations of innovation and entrepreneurship education, teachers are responsible for evaluating the professionalism of innovation and entrepreneurship education, and students test and evaluate its effectiveness. Secondly, the external evaluation subjects include government departments, employers, parents of students, etc., and comprehensively evaluate whether the school innovation and entrepreneurship education has a good development environment and significant training effect. Among them, the employer's evaluation is the most important, which directly

reflects whether the school's innovation and entrepreneurship education achievements reflect the market demand orientation. Through diversified evaluation subjects, this paper evaluates the work of innovation and entrepreneurship education in schools from multiple angles, levels and directions, and provides the basis for adjustment and improvement of the development of innovation and entrepreneurship education in schools in the future.

#### **4.2.2 Diversification of Evaluation Methods**

Innovation and entrepreneurship education involves students' innovative spirit, entrepreneurial consciousness, comprehensive quality and many other aspects. When evaluating innovation and entrepreneurship education, we must also adopt diversified evaluation methods. It is necessary to combine internal evaluation with external evaluation, static evaluation with dynamic evaluation, process evaluation with result evaluation, and build a scientific, comprehensive, systematic, objective and fair diversified evaluation method. First, change the evaluation method dominated by the static course examination results, combine the students' personalized and open innovation and entrepreneurship activities, formulate a flexible evaluation system for examination results, and incorporate the students' innovation and entrepreneurship achievements and the second classroom activities into the evaluation system. Assessment system, the establishment of credit replacement supporting system, stimulate students' enthusiasm for innovation and entrepreneurship, and expand the depth and breadth of innovation and entrepreneurship activities; The second is to expand the scope of evaluation, which is not limited to the evaluation of student competition awards and technical patent achievements, but to form a comprehensive evaluation of innovation and entrepreneurship education. Schools use financial related indicators to evaluate the investment of educational resources, social evaluation institutions to evaluate the scientificity of the operation mechanism of school innovation and entrepreneurship education, and questionnaires and interviews are used to feed back the achievements of innovation and entrepreneurship education.

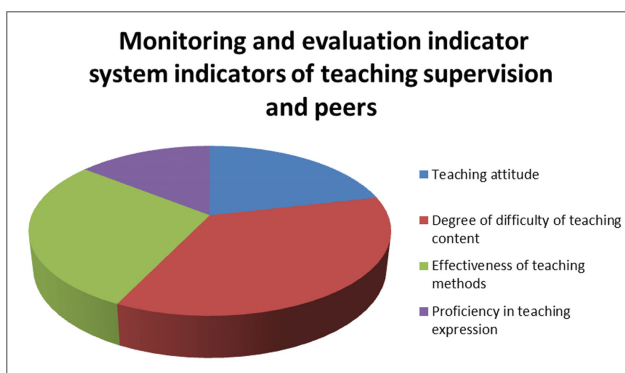
#### **4.3 Improve the Evaluation System**

A complete curriculum evaluation system should include three parts, namely, scientific organizational system, basic normative system and perfect application system [8]. Determining the evaluation content and refining the evaluation elements only solve the basic problems in the construction of the evaluation system. In order to implement the curriculum evaluation smoothly, the basic evaluation elements must be effectively designed and integrated.

##### **4.3.1 Pay Attention to Scientific Effectiveness and Set up Diversified and Open Innovation and Entrepreneurship Courses**

Innovation and entrepreneurship education in colleges and universities is an important part of the teaching quality assurance system [9]. In order to realize the smooth development of innovation and entrepreneurship education, the construction of innovation and entrepreneurship education evaluation system must be based on the teaching quality assurance system, and ensure that the work operation meets the evaluation requirements

of the teaching quality assurance system. The institutions responsible for the evaluation of innovation and entrepreneurship education in schools should carefully study the basic evaluation standards of the school teaching quality guarantee system for innovation and entrepreneurship, and formulate the evaluation indicators of the evaluation system in combination with the inspection standards of development planning, operation mechanism, management mechanism, evaluation methods and educational achievements of innovation and entrepreneurship education, so as to ensure that the evaluation of innovation and entrepreneurship education is covered in the operation process of the teaching quality guarantee system, and avoid the contradiction or repeated evaluation of the evaluation indicators [10]. The setting of monitoring and evaluation indicators for leaders pays more attention to macro-control, focusing on setting evaluation indicators from 15 aspects, such as teachers' preparation for lessons, effective classroom management, and students' attendance. The scores of each evaluation indicator are not specifically divided, and the total evaluation score is 100; A monitoring and evaluation index system for teaching supervision and peers has been established. First-class indexes are set from six aspects: teachers' teaching attitude, difficulty of teaching content, effectiveness of teaching methods, proficiency of teaching expression, effectiveness of classroom management and teaching effect. At the same time, according to the actual curriculum, there are corresponding second-class evaluation indexes under each first-class evaluation index, with a total score of 100, accounting for 15%, 25%, 20% and 10% respectively. The setting of student monitoring and evaluation indicators mainly focuses on students' learning results. There are five aspects of teaching effect, teaching attitude, teaching content, teaching method and teaching expression. There are no secondary indicators. The total score of the assessment is 100 points, and each indicator accounts for 30%, 25%, 20%, 15% and 10% respectively. The monitoring and evaluation index system of each college is mainly targeted and characteristic setting, and the specific evaluation index is set by the college offering innovation and entrepreneurship courses in combination with its own discipline and specialty, with a total score of 100 points (Figs. 1 and 2).



**Fig. 1.** Monitoring and evaluation indicator system indicators of teaching supervision and peers (owner-draw)



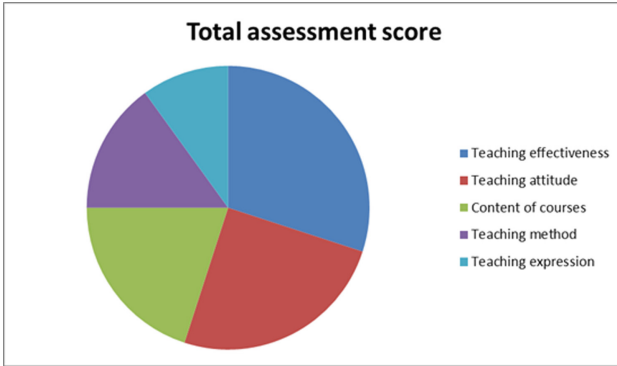


Fig. 2. Student monitoring and evaluation indicators (owner-draw)

### 4.3.2 Use Various Indicators to Realize Dynamic Evaluation

Curriculum evaluation indicators adhere to the market-oriented approach, with the improvement of students' ability as the core [11], establish a monitoring and evaluation index system for innovation and entrepreneurship curriculum quality, and combine with the subject of innovation and entrepreneurship curriculum evaluation in colleges and universities, and set up curriculum evaluation indicators that are compatible, diversified and open. First, make full use of online and offline platforms such as college students' innovation and entrepreneurship education platform, practice education base, entrepreneurship center, incubation base. To dynamically track students' innovation and entrepreneurship activities and form a dynamic evaluation method, which is convenient for schools to provide guidance and services for students in the whole process. Secondly, the main body of innovation and entrepreneurship education is college students, and the evaluation of innovation and entrepreneurship education should also focus on students. As students' personality characteristics, professional ability, values and outlook on life, interests and hobbies will change in the undergraduate education stage, the evaluation system of innovation and entrepreneurship education should also be designed in combination with the changes of students [12]. The evaluation index should pay attention to students' correct understanding of the social environment, their own entrepreneurial ability, anti-frustration ability, self-regulation ability, etc. The evaluation index should be used to track and evaluate the students, and the evaluation results should be fed back to the students in time to help them define their future development orientation, development goals and development directions.

## 5 Conclusions

To explore the curriculum system of innovation and entrepreneurship education with its own characteristics, which is in line with the development of higher education in China, we should combine the development of colleges and universities. Firstly, accurately position the courses related to innovation and entrepreneurship education, incorporate them into the school syllabus and make teaching plans, and strive to create a top-quality

gold course of entrepreneurship education, which is the content of general education and is available to all students in the form of compulsory or compulsory, elective or minor. Secondly, the form of innovative entrepreneurship education course should focus on practical training, and the form of the course should have diversified combination of in-class and out-of-class, the first classroom and the second classroom, teaching practice and social practice, and production. Thirdly, in response to the diverse needs of talents in colleges and universities, as well as the actual needs of graduates in employment, postgraduate entrance examination and determination to start a business, innovation and entrepreneurship education in colleges and universities should adapt to them and improve the corresponding educational management mechanisms, such as minor majors, double-degree system, guidance of postgraduate entrance examination and vocational qualification certificates, establishment of discipline and technology competition mechanism, entrepreneurship training and project incubation and cultivation mechanism. Fourthly, to strengthen the construction of network resources for innovation and entrepreneurship education, it is suggested that the National Institute of Innovation and Entrepreneurship Education should take the lead and establish a nationwide network resource alliance for entrepreneurship education, so that the excellent resources of entrepreneurship education in domestic universities can be shared together.

## References

1. Hu Chuli. Quality Assurance and Evaluation System of Innovation and Entrepreneurship Education in Applied Undergraduate Colleges [J]. *Innovation and Entrepreneurship Education*, 2017(8).
2. Liu Qiang. Construction and Practice of Quality Evaluation System of Innovation and Entrepreneurship Education in Chinese Universities [J]. *Journal of Nanchang Institute of Technology*, 2016(4).
3. Song Zhishuai, Wang Zhangbao. Evolution and development trend of innovation and entrepreneurship education ecosystem in China [J]. *China Higher Education*, 2020, (2).
4. Xu Xinzhou. Research on Innovation and Entrepreneurship Education in “Double First Class” Universities Driven by “Two Convergence” [J]. *School Party Building and Ideological Education*, 2020(20).
5. Zhong Qiquan. *Curriculum Theory* [M]. Beijing: Education Science Press, 2007.
6. Liu Zhijun, Bin Xu. Future-oriented Curriculum and Teaching Evaluation: Difficulties, Opportunities and Trends [J]. *Curriculum, Teaching Materials and Teaching Methods*, 2020, 40 (1): 17–23.
7. Shi Li, Li Jizhen. Innovation and entrepreneurship education in colleges and universities: connotation, dilemma and path optimization [J]. *Heilongjiang Higher Education Research*, 2021(2).
8. Li Hongen. Construction of school curriculum evaluation system [J]. *Educator*, 2018(16): 9–10.
9. Han Gengjun. Research on the Dual Transformation of Innovation and Entrepreneurship Education Ecosystem in Colleges and Universities under AI Enabling [J]. *Science and Technology and Innovation*, 2022 (18): 136–138. <https://doi.org/10.15913/j.cnki.kjycx.2022.18.039>.
10. Liu Wenwei, Yang Liu. Practical Path of Effective Integration of Innovation and Entrepreneurship Education and Aesthetic Education in Colleges and Universities [J]. *Journal of Donghua University (Social Science Edition)*, 2022, 22 (03): 108–111+118. <https://doi.org/10.19883/j.1009-9034.2022.0079>.

11. Yang Jian, Yang Huixi, Zheng Zhiwei Research on the Construction and Application of the Quality Evaluation System of Innovation and Entrepreneurship Education – Taking the Private Undergraduate Colleges in the Greater Bay Area of Guangdong, HongKong and Macao as an Example [J]. *Economist*, 2022 (09): 148–149+151.
12. Yu Weijuan Research on the quality evaluation of innovation and entrepreneurship education under the theory of student participation – an empirical analysis based on 10 application-oriented undergraduate colleges in Jiangxi Province [J]. *Journal of Yuzhang Normal University*, 2022, 37 (04): 87–90.

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