

# Curriculum System Design Based on Curriculum Modular Teaching - Take the Course "Innovation and Entrepreneurship" as an Example

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**Abstract:** In recent years, with deepening of education reform and continuous development of education industry, innovation and entrepreneurship education has become one of compulsory courses in colleges and universities, which is main path to cultivate entrepreneurial talents. As important part of innovation and entrepreneurship education, evaluation system is important means and test method to ensure teaching effect and quality of innovation and entrepreneurship courses. Course assessment is an important means to test the quality of teachers teaching and evaluate the effectiveness of students learning. In order to give full play to the function of assessment and evaluation, a new course assessment plan was designed based on the modular reform of the innovation and Entrepreneurship course. The design points include four aspects, full implementation of modules, multi-dimensional assessment and assessment, diversity of assessment methods, and attention to the whole process assessment. The course assessment scheme has been applied to teaching practice and has achieved relatively satisfactory results. Students enthusiasm for module learning and innovative thinking and entrepreneurial skills have been effectively improved. How to build reasonable curriculum system based on the course innovation and entrepreneurship is main content of this paper. which also provides a basis and reference for relevant future research.

**Keywords:** Modularization, Assessment Scheme, Innovation and Entrepreneurship

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## 1. Introduction

By comparing the relevant research on the curriculum system construction of innovation and entrepreneurship education in domestic and foreign universities, it can be seen that the development of entrepreneurship education in western developed countries is earlier than that in China, and foreign scholars have more in-depth research on this field, which has been systematic and systematic [1]. Innovation and entrepreneurship course shave many courses, richer course content, diverse teaching modes and guaranteed teachers. However, because the domestic innovation and entrepreneurship education has only been vigorously developed in recent years, and a systematic the cortical framework has not been formed, there is still a gap in the research of innovation and entrepreneurship curriculum system in Chinese universities compared with foreign

universities [2]. For the theory and practical experience of its innovation and entrepreneurship curriculum system construction, it is relatively lacking. In terms of curriculum setting, domestic application-oriented undergraduate universities offer fewer innovation and entrepreneurship courses, mainly elective courses. Also for the curriculum implementation, it has been close to foreign countries, and most of the methods of case teaching, discussion method and situation simulation to make the teaching lively.

In recent years, the modularization of the curriculum system has become the basic direction of our country's practical education curriculum reform. Because it fits the direction of application-oriented talent training, the modular construction mode of the curriculum system is widely used in the practice of curriculum teaching reform. The concept of molecularity comes from the field of computer software development. In short, the code belonging to the same

function is divided into independent code modules, each module can run independently, and can be connected to each other to form a complete system. Specifically, it is based on the needs of professional ability training of students in related professional fields, closely linked to the actual development of local industries, and designed the teaching content of professional courses into training modules of specific skills, and organized and implemented teaching and assessment according to the modules, so as to cultivate professional talents. The program's capability objectives were achieved.

As an important part of teaching reform, course assessment is an important part of the talent training process in colleges and universities, and it is also an important means to test teachers' teaching effect, evaluate students' professional level and master knowledge and skills. Therefore, in the process of implementing the modular teaching reform of the curriculum, it is very important to establish scientific course assessment standards and evaluation methods to effectively stimulate students' initiative in learning, which directly determines the implementation effect of the course modular teaching reform.

## 2. Modular Reconstruction of Course Teaching Content

The ability of innovation and entrepreneurship is the core ability to realize the goal of entrepreneurship and innovation of all people. This paper selects the course "Innovation and Entrepreneurship" as the object of modular teaching reform. "Innovation and Entrepreneurship" is a comprehensive practical training course with strong application, which plays an important supporting role in improving students' ability to innovate and start a business [3].

With the deep integration of entrepreneurial activities and technology, the number of new generations of college students participating in the innovation and entrepreneurship army is also increasing day by day, and innovative products, innovative models, and innovative methods have enriched the traditional business environment. At the same time, people's demands for products and services are increasingly diversified and personalized, and market competition is further intensified. In this context, enterprises have put forward higher requirements for the comprehensive quality and

position ability of managers, "understanding professionalism, being able to communicate, understand the market, and be good at innovation" has become the "standard" of various enterprises, thus forcing the teaching of colleges and universities to keep up with the changing rhythm of the talent market, adjust and improve the teaching content, improve and optimize the teaching design, and strive to cultivate students with better comprehensive quality. High-level compound talents with solid professional knowledge and high innovation and entrepreneurship ability to adapt to changes in society's demand for talents.

The formulation of modules is a key factor for the success of modular teaching reform. According to the Ministry of Education's document on the training of professional talents in vocational colleges (Jao Zheng Cheng (2019) No. 13), the curriculum team proposed: "We should pay attention to the synergy between learning and use, the unity of knowledge and action, and focus on cultivating students' innovative spirit and practical ability, and enhance students' ability to career adaptability and sustainable development ability." With the goal of cultivating students' entrepreneurial ability and improving innovative thinking, based on the real work situation, the "Innovation and Entrepreneurship" course will be reformed into modularization, and the teaching content will be reconstructed according to the modularization requirements, so as to form a professional ability training module with outstanding application, and guide students to carry out modular learning. Through group study, role-playing, achievement display and other teaching activities, students can master professional knowledge and accumulate job skills to improve their employment competitiveness, thus laying a solid foundation for dealing with real career scenarios in the future.

In the teaching practice of the "Innovation and Entrepreneurship" course, the real modules of enterprises are connected, and the theoretical knowledge covered by the course is decomposed into multiple modules in combination with social and economic development. It is divided into four modules: introductory courses, ability improvement courses, integration courses and practical courses. Each module includes several specific tasks, as shown in the following table:

*Table 1. Course Description.*

Modules	Key Tasks	Topics Description
Module 1: Introductory Course	Task 1: Creativity	Learn (a) how to generate original and distinctive ideas (creativity), (b) how to assess if the ideas are feasible (feasibility), and (c) how to consider implementing the ideas (commercialization). The course incorporates hands-on experience, inspires students to develop foresight, and cultivates abilities to appreciate market conditions and make a change;
	Task 2: Organization Initiation	
Module 2: Advanced Course	Task 1: Marketing and Sales	Explore the development of the industry and market analysis, operations planning, and human resources management; learn to formulate sales strategies and develop basic financial analysis methods and systems for start-ups.
	Task 2: Finance and Accounting	Investigate the application of marketing principles in establishing and implementing marketing functions of a new company, including distribution channels, pricing strategies, promotions (such as the use of social media), locations, direct and indirect sales methods, negotiations, customer management, and customer services;
	Task 3: Organization Management	Analyze the application of principles learned in accounting and finance courses, including application activities such as raising funds, managing funds, and keeping track of funds. Understand analytical methods, prepare income statements, balance sheets, and cash flow statements for start-ups, and use financial software to evaluate and manage the financial status of an organization, especially in its early stages;

Modules	Key Tasks	Topics Description
Module 3: Integrated Course	Task 1: Business Planning	Explore the application of principles from courses in human resources management, leadership, and micro- or macro-organizational behavior, including application activities; learn when the management should evolve or even change. The module offers integrated experience based on topics and business ideas from earlier courses, with the goal of developing one or several business plans. Students are required to evaluate the commercial and social value of a business, in a way to initially assess its feasibility thoroughly and attract investment. A complete business plan will be created, outlining how business presence is achieved optimally.
Module 4: Practical Course	Task 1: Innovation and Entrepreneurship Practice	The module involves practice in real work scenarios where students are enabled to participate in activities relevant to their previous courses. Students with business plans will have opportunities to implement them; students wishing to work in start-ups will engage in consulting or field trips of start-ups; students preferring to work in government or non-government organizations will take part in local economic development or cooperation with business consultancies.

### 3. Design of the Modular Assessment Scheme of the Course

Changing the traditional course assessment mode is an effective way to improve the quality of education and teaching [4]. Under the traditional assessment mode, students' course performance evaluation is generally composed of normal grades and final grades according to a certain proportion. The normal grades are mainly based on several indicators such as attendance, normal homework, and classroom performance. It is difficult to comprehensively, objectively and impartially reflect the real students. While the final grades are dominated by written tests and account for a relatively high proportion, which makes it easier to form and strengthen the "result-oriented", it is more important that the traditional assessment method is difficult to examine students' ability to use the knowledge and skills they have learned to solve practical problems, especially for professional practice courses with strong application.

In order to better meet the needs of society and enterprises and achieve the goal of cultivating high-quality applied talents, the "Innovation and Entrepreneurship" course has implemented a modular teaching reform. The main body status has changed from "teaching-based" to "learning-based", and from "knowledge transfer" to "ability training". Correspondingly [5], the course assessment plan must be adjusted and adjusted quickly, closely follow the pace of teaching reform, optimize the assessment content, change the assessment method, and realize the migration from "achievement-oriented" to "result-oriented", so as to create favorable conditions for improving students' professional ability and comprehensive quality.

The purpose of designing a modular assessment plan that matches the teaching content of the course is to conduct assessment and evaluation of students more objectively to effectively mobilize the enthusiasm of students to participate in module learning, and to promote students' learning ability, work ability, innovation ability and teamwork ability through the completion of the module [6]. The improvement of cooperation ability has really changed the problems in the existing course assessment in the past, such as insufficient assessment design, unclear assessment purpose, relatively single assessment form, the process assessment lacks attention and so on, so as to give full play to the positive guiding and

motivating role of assessment and evaluation.

The design points of the modular assessment plan for the "Innovation and Entrepreneurship" course are as follows:

#### (1) Module implementation of full staff

After the teacher assigns the module tasks, the students freely form a module group of 2-4 people and complete the role assignment. The teacher makes appropriate adjustments according to the grouping principle of "heterogeneity within the group and homogeneity between groups" and the actual learning situation. The module team decomposes tasks according to the module situation and specific requirements to ensure that each team member understands their role and tasks in the module, and uses the knowledge and skills they have learned to cooperate to complete the module tasks according to the actual operation of the enterprise. In order to effectively suppress the "free rider" behavior [7], on the one hand, the process control should be strengthened. Teachers understand and master the development of students' modules through students' module progress reports, stage results display, and "cloud" and other technical means, and examine each team member's learning attitude, degree of participation, and quality of results, and give evaluations accordingly. Special attention should be paid to teachers who should answer and give guidance in a timely manner when students encounter problems or difficulties. On the other hand, optimize the assessment process. For example, for the "plan" category of results reporting, the group is required to present the module results in the form of PPT and conduct a defense. The reporters are determined in advance according to the lottery, and the report results are also included in the personal scores of each team member, thus affecting the team members' scores. Therefore, in order to achieve better reporting results, the enthusiasm and participation of team members have been significantly improved, and the cooperation between team members has become more conscious and sufficient, all of which are "building blocks" for the improvement of the module results [8]. In this process, students' autonomous learning ability and professional skills have been improved, their teamwork awareness and spirit of cooperation have been further strengthened, and the fairness and objectivity of the assessment results have been ensured to a large extent.

#### (2) Multi-dimensional assessment and evaluation

The "Innovation and Entrepreneurship" course is based on the ability requirements of financial enterprises' marketing positions [9], highlight's ability standards, and conducts multi-dimensional assessments. The first is the "attitude"

dimension, which mainly evaluates students' learning attitude, participation awareness, cooperation spirit, service awareness and inquiry spirit during the implementation of the module. The second is the dimension of "ability", which consists of professional ability and comprehensive ability. Professional ability is mainly reflected in those competencies required to complete the modules, the market research ability, market analysis ability, marketing planning ability, customer management ability, etc.; Comprehensive ability is mainly inspected from the aspects of self-learning ability, knowledge application ability, communication and expression ability, generalization ability, teamwork ability, innovation ability and adaptability. The third is the "effect" dimension, which is a comprehensive evaluation of students' knowledge learning, skill mastery, module completion quality, reporting and defense, and results display effects. Taking the "integrated module" as an example, under the pressure of "competition between groups" and the sense of team honor, the module group especially hopes to present their best works and achievements through teamwork. Each group actively carries out module learning, digs deep into customer needs, refines product selling points [11], formulates marketing plans, explores innovative elements, and finally completes a realistic business plan with the participation of all team members. In the presentation of results and the reporting and defense, Team members are highly cooperative in presenting the module results. After the whole module was carried out, students' learning attitude was correct, and their sense of participation, cooperation spirit, professional ability and comprehensive ability were effectively improved.

### (3) Diversity of assessment methods

The purpose of teaching evaluation is to promote students' development, diagnose and give feedback on students' learning status, but a single assessment method is often difficult to achieve the above goals. The "Innovation and Entrepreneurship" course uses modules as the carrier to carry out teaching activities, and tries to use various methods to comprehensively evaluate students' learning performance in the course assessment link. The first is to introduce the reporting and defense link. After the module study, the module team completed the investigation report. In addition to the evaluation of the quality of the text results such as the planning plan, the links of achievement presentation, report and defense are specially introduced. Through the report and defense, the "true gold content" of the text results can be more objectively tested. The second is to implement the mutual evaluation strategy within the group. The focus of mutual evaluation within the group is to objectively evaluate the cooperation attitude, cooperation quality, participation, module contribution, innovative thinking, etc. of the group members. Mutual evaluation within the group is not only respect for the subjective status of students [12]. It also cultivates their objective and fair attitude towards people and things. It can also be used as a cooperative learning method to help students reorganize their thinking in equal communication and further improve their abilities by improving and perfecting their works. The third is to actively

carry out inter-group mutual evaluation. The text results, role-playing, and simulated marketing completed by the module group can all be shared through the "display link". Students are encouraged to discuss and speak at this stage. Carrying out inter-group mutual evaluation is not only conducive to broadening students' thinking, inspiring each other, and learning from each other's strengths [13], it can also form a learning atmosphere of healthy competition among each module group which is conducive to stimulating students' innovative thinking and cooperation awareness.

### (4) The assessment pays attention to the whole process

Evaluation is an important part of the whole teaching activities. The "Innovation and Entrepreneurship" course takes modules as the carrier, and integrates module learning, module implementation, and module implementation into the course teaching activities. Specifically, the first is to strengthen process management. Teachers guide students to actively participate in the module, and encourage students to jointly promote the completion of the module through group cooperation; At the same time, urge students to pay attention to the "process accumulation" [14] of knowledge and skills through module learning, students are trained to master the skills related to innovation and entrepreneurship in various scenarios, and the students' entrepreneurial ability can be continuously improved. The second is to pay attention to process evaluation. Process evaluation is the evaluation of students' learning process, and it is an opportunity to give students multiple evaluations in a timely manner in the teaching process, which can effectively promote the improvement of students' comprehensive ability and teachers' supervision of the teaching process [15].

The process evaluation is mainly to assess the daily performance of students, focusing on examining the students' attitudes towards module learning, participation in the module, performance in teamwork, and the "quality" and "quantity" of students' usual completion of module tasks. The third is to adjust the weight of the assumptive assessment. The assessment results of the students' courses are based on the performance of the students in the whole process of the implementation of the module, and are calculated by the process assessment and the assumptive assessment according to a certain weight. Among them, the proportion of the assumptive assessment in the total course grade can be appropriately reduced, so as to avoid the evaluation results that may be insufficiently objective and fair due to only one "summary" assessment.

## 4. Conclusion and Discussion

Innovation and entrepreneurship education covers a variety of educational concepts and practical means, and there is no fixed model. Therefore, based on the implementation of modular teaching reform, the course "Innovation and Entrepreneurship" has designed a new course assessment scheme and applied it to teaching practice. At this stage, satisfactory results have been achieved. Students' enthusiasm for modular learning, entrepreneurial ability and innovation

skills are effectively improved.

The course assessment scheme needs continuous exploration and innovation in teaching practice in order to be perfected. The research object selected in this paper is the "practice" courses that are easier to implement modular teaching reform. For other courses, in-depth research and flexible adjustment are required in combination with course characteristics and specific learning conditions. It is hoped that the design ideas of the course modular assessment scheme proposed in this paper can provide some reference for teaching reform practice.

In the research, how the curriculum construction and talent cultivation serve the social and economic development are discussed for many times. However, as higher education institutions, applied universities need to continuously grasp the responsibility of "university" as the leader of social development. Universities should not only respond to the needs of society, as a pioneer of social development, higher education should become a leader of social development. In the process of transformation of colleges and universities, it is not only necessary to change the form, but also to respond to social needs in the course content and way, and at the same time, to shoulder social responsibilities and lead the social development from major to curriculum. As an important support of higher education internal, course construction can bring significant changes for the development of colleges and universities, as science and technology itself cannot promote the development of organization, the construction of curriculum needs together with organization and governance, can bring greater improvement of colleges and universities, and cause applied higher education and higher education system improvement.

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