

# Research on the Teaching Mode of Innovation and Entrepreneurship Education Courses in Colleges and Universities based on Virtual Teaching Research Section

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**Abstract:** This paper takes four colleges and universities in Heilongjiang Province, the teaching mode of innovation and entrepreneurship courses as the object of study, and uses the virtual teaching and research office as a platform to explore how to effectively integrate the links between the employment guidance courses, innovation and entrepreneurship education courses and professional education courses to improve the quality of talent cultivation in the context of the new era. With the help of modern information technology, it breaks the limitations of space, time and geography, and realizes the efficient sharing and optimal allocation of teaching resources.

**Keywords:** Virtual Teaching Research Section, Resource Sharing, Collaborative Education.

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## 1. Introduction

With the rapid development of education informatization and the increasing popularity of the teaching mode of "Internet+", virtual teaching research section, as a new form of teaching organization, is gradually showing its unique advantages and potential. Especially in Heilongjiang province, the employment and entrepreneurship of college graduates has always been a hot spot of social concern, so how to carry out the research on the teaching mode of innovation and entrepreneurship courses based on the virtual teaching research section is of great practical significance for improving the quality of talent training and promoting the smooth employment and entrepreneurship of graduates.

## 2. Concept and Characteristics of Virtual Faculty

The virtual teaching research section is a community of teachers based on a modern information technology platform, dynamically organized by teachers from different regions, schools, disciplines or specialties to jointly carry out collaborative teaching research and reform practices. It is characterized by openness, cumulative nature and co-construction and sharing, which can break the limitations of regions and schools, realize the sharing of high-quality teaching resources, promote exchanges and cooperation among teachers, and improve the level and effect of teaching.

## 3. The Current Status of Innovation and Entrepreneurship Programs in Colleges and Universities

### 3.1. Survey Methodology

The four selected colleges include one undergraduate college and three specialized colleges, and the students are relatively weak in terms of employability. How to provide

high-level innovation and entrepreneurship guidance courses is crucial, and correctly evaluating the quality of innovation and entrepreneurship courses and the teaching effect will help students to have high-quality employment. This survey focuses on both teachers and students, both in terms of good teaching by teachers and support from students. In addition, factors such as social demand and the nature of jobs should be considered when designing the courses. The two sets of questionnaires used in this survey are for students and teachers respectively, which makes it easy to carry out the analysis in depth.

Students were taken as the research object. A total of 200 students from 4 colleges and universities were selected, 200 questionnaires were distributed and 200 were returned with a valid recovery rate of 100%. Among them, there are 120 male students and 80 female students. The majority of science students, 84, engineering 61, arts 55. In the grade level, the largest number of students were freshmen, totaling 130, and the number of sophomores, juniors, and seniors were 30, 22, and 18, respectively. The questionnaire included five major parts, including attitudes towards innovation and entrepreneurship education, school teaching resources for innovation and entrepreneurship, curriculum for innovation and entrepreneurship, practical activities, and evaluation of teaching quality, etc. It consisted of 20 sub-questions, including "Whether or not innovation and entrepreneurship courses are offered in your school", "What ways do you think schools should carry out employment and entrepreneurship education", "What are the ways to carry out employment and entrepreneurship education? There are 20 questions, including "whether your school has offered innovation and entrepreneurship courses", "in what way do you think the school should carry out innovation and entrepreneurship education", "do you hope that the innovation and entrepreneurship courses of the school focus on practice or theory", "whether your school has held activities related to innovation and entrepreneurship", etc.

**Table 1.** Identity statistics

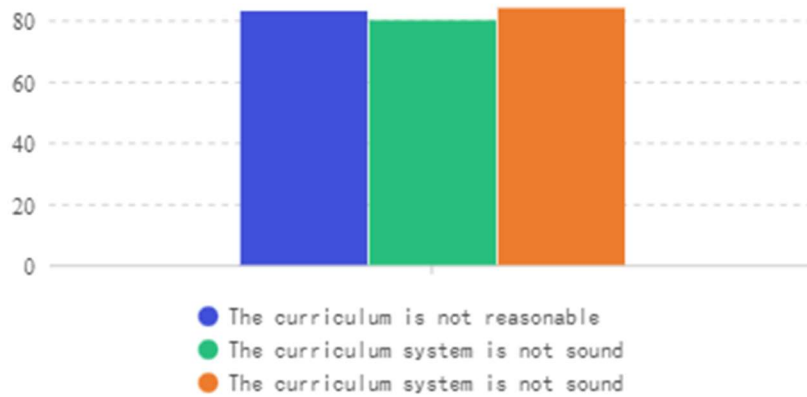
Dependent Variable	Independent Variable	Values
Gender distribution	Male	120
	Female	80
Academic category	Science	84
	Engineering	61
	Arts	55
Grade Level	Freshman	130
	Sophomore	30
	Junior	22
	Senior	18

Secondly, teachers were targeted. A total of 40 teachers from 4 universities were selected, 40 questionnaires were distributed and 40 were returned. Including 16 male teachers as well as 24 female teachers. The questionnaire includes four

major parts: self-assessment of teaching effect, status expectation and comparison, whether the teaching method is scientific, and self-inadequacy. Taking teachers' identity expectation and contrast as an example, it mainly focuses on the contrast between teachers' and students' expectations in terms of the type of employment and entrepreneurship instructors, for example, teachers' expectations of counselors are higher than students', but students expect more to be instructed by groups such as teachers of career guidance centers and human resource administrators.

### 3.2. Analysis of Results

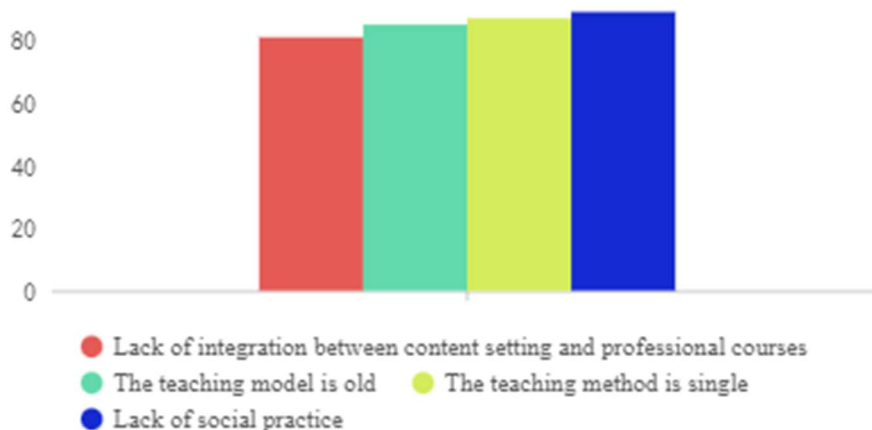
The analysis of the results of this survey found that all the four colleges and universities offer employment and entrepreneurship guidance courses, however, there are very obvious problems such as irrational curriculum, incomplete curriculum system, and the teaching content needs to be perfected, so much so that the overall quality of teaching is constrained and the satisfaction of students is low.



**Figure 1.** Open course analysis

Individual colleges and universities have unclear teaching objectives and lack of detailed teaching plans, which makes it impossible to promote the employment and entrepreneurship guidance courses smoothly. In terms of course content, there is still the problem of "focusing on theory but not on practice", and the content is not sufficiently integrated with the

specialized courses, and it is difficult to meet the needs of the society, so that the students' employment and entrepreneurship ability is not exercised. The teaching mode is outdated and the method is single, and teachers use classroom lectures at most, while students are most looking forward to field trips and social practice activities.



**Figure 2.** Course content analysis

## 4. Construction of Teaching Mode of Innovation and Entrepreneurship Course based on Virtual Teaching Research Section

### 4.1. Establishment of Cross-campus and Cross-disciplinary Virtual Teaching Research Section

It needs to be made clear that a virtual teaching and research office is a kind of teaching and learning organization based on a modern information technology platform, which has the characteristics of openness, cumulative nature and co-construction and sharing [1]. This kind of teaching and research office can break the limitations of geography, schools and disciplines, realize the dynamic organization between teachers from different regions, schools, disciplines or specialties, and jointly carry out collaborative teaching research and reform practice. By integrating the resources of teachers of innovative entrepreneurship courses in Heilongjiang, a virtual teaching research section platform is established to provide support for carrying out collaborative teaching research and reform practice.

### 4.2. Diverse Course Content Design

According to the characteristics of regional industries and the demand of employment market, diversified course contents are designed, including career planning, entrepreneurship foundation, innovation and entrepreneurship practice, etc., in order to improve the employment competitiveness and entrepreneurial ability of graduates. For colleges and universities, the teaching demand of innovation and entrepreneurship courses is mainly reflected in the cultivation of high-quality talents with innovation spirit, entrepreneurial awareness and entrepreneurial ability. The teaching objectives, on the other hand, include improving students' vocational literacy, innovation and entrepreneurship ability and social adaptability, and helping them better adapt to market demand and realize their self-worth.

### 4.3. Adoption of Flexible and Diverse Teaching Methods and Tools

Utilizing the virtual teaching and research room platform, the online and offline teaching methods are combined, and diversified teaching methods and means such as case teaching, project teaching and flipped classroom are introduced to stimulate students' interest and enthusiasm in learning. Combining the characteristics of the virtual faculty and the teaching needs and objectives of the innovation and entrepreneurship courses, a teaching mode based on the virtual faculty can be constructed[2]. The model can include online teaching, offline practice, interactive seminars and other links to realize the sharing of teaching resources and the innovation of teaching methods through information technology means. At the same time, the model should also focus on the subjectivity and participation of students to stimulate their learning interest and motivation.

### 4.4. Establishment of a Sound Evaluation and Feedback Mechanism

Through regular teaching evaluation and feedback, we can

keep abreast of the students' learning situation and teachers' teaching effect, and provide a basis for teaching improvement and optimization. In the process of teaching implementation, it is necessary to give full play to the advantages of the virtual teaching and research office and organize teachers to carry out collaborative teaching research and reform practice. At the same time, it is also necessary to establish a scientific teaching evaluation system to objectively and comprehensively assess the teaching effect, so as to timely adjust the teaching strategies and methods.

## 5. Conclusion

The research on the teaching mode of employment and entrepreneurship courses in colleges and universities based on the virtual teaching room has important practical significance and prospects. By integrating and optimizing teaching resources and constructing a new type of teaching mode and evaluation mechanism, it can improve the employment competitiveness and entrepreneurial ability of graduates and promote the development of local economy and society. In the future, the application and promotion path of this teaching mode can be further explored and improved to provide reference for colleges and universities in more regions. In conclusion, the research on the teaching mode of employment and entrepreneurship courses in colleges and universities based on the virtual faculty is a work of great significance[3]. Through in-depth research and practice, it can promote the innovation and development of employment and entrepreneurship course teaching in colleges and universities, and contribute to the cultivation of more high-quality talents with innovative spirit and practical ability.

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