



# The Construction of Innovative Education Module System in Higher Vocational Colleges Based on Big Data

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**Abstract.** In today's era, big data is given the background of information, can be extracted into the rule of knowledge, with the help of various tools on the basis of analysis to provide the right decision becomes a resource. It is also worth exploring how higher vocational colleges use these information, knowledge and resources to carry out innovation and entrepreneurship education of higher vocational students. The purpose of innovation and entrepreneurship education in higher vocational colleges is not to let every student to start a business, but more importantly to cultivate students' entrepreneurial spirit and entrepreneurial ability, so that higher vocational students will have the ability to grasp entrepreneurial opportunities in the future era of big data and precise entrepreneurship [1].

**Keywords:** entrepreneurship education innovation · Big data horizon · measure

## 1 Introduction

The cultivation of innovative spirit among college students in higher vocational colleges is conducive to the cultivation of employment skills, the innovation of traditional enterprise culture, the enhancement of professional quality and the promotion of sustainable development. Colleges and universities should make full use of the perspective of big data to improve the entrepreneurial consciousness of college students, improve their entrepreneurial consciousness, and improve their entrepreneurial consciousness [2].

## 2 Existing Courses of Innovation and Entrepreneurship Teaching System in Higher Vocational Colleges

In our higher vocational education, innovation and entrepreneurship education in colleges and universities are increasingly concerned [3], and the demand for their training and talents is also growing larger. Through the comprehensive calculation of the above evaluation and weighted index, the following formula (1) can be obtained:

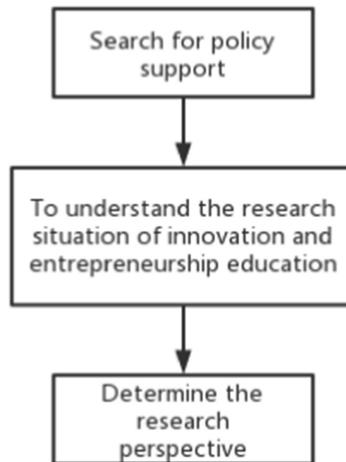
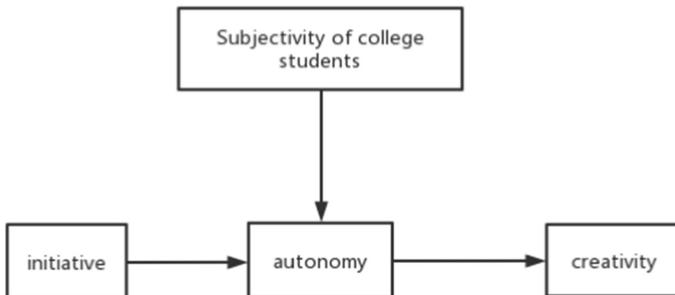
$$P_5 = \begin{cases} P_{11} P_{12} P_{13} \\ P_{21} P_{22} P_{23} \\ P_{J1} P_{J2} P_{J3} \end{cases} \quad (1)$$

Innovation and entrepreneurship education has experienced three stages of development: entrepreneurship education, entrepreneurship education and entrepreneurship education [5]. The policies of entrepreneurship and innovation are sorted out in a certain period from the proposal of innovation education idea, entrepreneurship education idea, entrepreneurship education idea and the sequence of innovation and entrepreneurship education idea. As shown in Table 1: The details are as follows:

As can be seen from the above table, in terms of the development direction of colleges and universities, from the cultivation of students' quality education to the cultivation of students' vocational skills, to the cultivation of students' ability of innovation and entrepreneurship; In terms of the education goal, our country has long been treating innovative education, entrepreneurial education especially entrepreneurial education as an effective method to solve the employment problems of college students, but because of the utility of intellectual property education and the lack of educational function, the education of innovative entrepreneurship is disconnected from the education of ordinary colleges and universities. Following the analysis by analogy, it can be concluded that for j, when it is 1, 2, 3, 4... k, then the following formula (2) can be supported. As shown

**Table 1.** Development schedule of innovation and entrepreneurship education

Time	Policy	Content	Task
1999.6	On deepening education reform The decision to comprehensively promote quality education	Put forward the idea of innovative education	Transition from exam-oriented education to quality-oriented education
2007.11	Notice on the Employment of Graduates of regular Institutions of higher Learning in 2008	The proposal of entrepreneurship education	Improve the practical ability and employability of graduates
2010.4	Notice of the Ministry of Education on the Establishment of the Steering Committee for Entrepreneurship Education in Higher Education Institutions of the Ministry of Education for 2010–2015	A college entrepreneurship Education Steering Committee has been established	For all college students, into the main channel of teaching

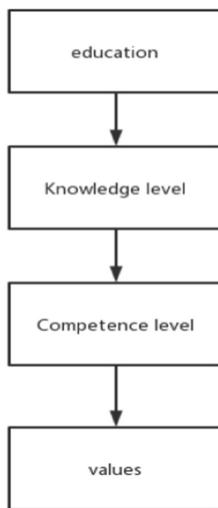
**Fig. 1.** Study flow chart**Fig. 2.** Conceptual map of college students' subjectivity

in Fig. 1, 2, 3:

$$\frac{U_{ij}}{\sum_{i=1}^4 U_{ji}} \quad (2)$$

### 3 Innovation and Entrepreneurship Education in Higher Vocational Colleges Under the Background of Big Data

In 2016, the Ministry of Education issued the Notice on the Employment and Entrepreneurship of Graduates of regular institutions of higher Learning in 2016, which clearly proposed that all colleges and universities should set up “innovation and entrepreneurship” courses, provide “innovation” compulsory courses and “electives” for college students, and include them in the “credit system”. This not only provides a new opportunity for innovation and entrepreneurship education in higher vocational and technical colleges, but also puts forward new requirements for the development of higher vocational education.



**Fig. 3.** Action mechanism diagram

#### 4 Construction and Implementation of “Modular” Teaching System of Innovation and Entrepreneurship Education Courses in Higher Vocational Colleges

In the syllabus of vocational and technical college, knowledge ability is the most basic and also an important part of students’ innovation and entrepreneurship education. In theory, the “general” teaching module in the “innovation and entrepreneurship” course of higher vocational and technical colleges should be different from the general “advanced” teaching method. The teaching materials should be designed according to the characteristics of vocational schools and the needs of students, so that everyone can understand them, so as to cultivate the awareness and skills of innovation and entrepreneurship, and then enhance their creativity and skills.

Entrepreneurship guidance is an important part of the entrepreneurial team. In the communication with students, teachers’ academic ideas, entrepreneurial spirit and technology will accumulate knowledge and improve their entrepreneurial spirit through their own practical actions and learning. As shown in Table 2:

At the same time, by building a multi-channel and multi-dimensional learning mode, a multi-dimensional communication platform for entrepreneurship, guiding students’ awareness of innovation, allowing higher vocational students to get in touch with cutting-edge knowledge concepts and market opportunities, so as to promote a shared innovation and entrepreneurship education mechanism.

**Table 2.** Interview outline

Question 1	Which departments are responsible for the innovation education of our school?
Question 2	What are the main forms of entrepreneurship education activities being carried out at present?
Question 3	If there is no call from the government, do you think it is necessary for our schools to carry out entrepreneurship education?
Question 4	Does the school have a proper training program and teachers for entrepreneurship education?
Question 5	What achievements has our school made in creating new businesses?
Question 6	Do we have any feedback from students who have received training in entrepreneurship education?
Question 7	Do we have any report on the effect of entrepreneurship education and training before and after implementation?

## 5 Conclusion

In short, in vocational and technical colleges, the four modules of creative entrepreneurship are mutually permeated, integrated and supported. In different majors, courses of creative creativity should be integrated with professional courses to promote their creativity and creativity in their respective majors.

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