

# ***Research on the Teaching Reform Design of "Foundation of Entrepreneurship" Course Based on 4S Concept -- A Case Study from Hebei GEO University, China***

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**Abstract:** As a necessary carrier to carry out the training goal of college students' innovation and entrepreneurship education ability, the course of "Foundation of Entrepreneurship" in colleges and universities has been concerned by education departments, educators and researchers. Considering the problems existing in college entrepreneurship courses, this paper combines 4S concepts (Stimulate, Support, Search and Share) with college innovation and entrepreneurship goals, designs the teaching reform of "Foundation of Entrepreneurship", and carries out teaching practice in Hebei University of Geosciences. It provides new ideas and methods for relevant colleges and universities to carry out innovation and entrepreneurship course construction and teaching, thereby improving college students' innovative thinking and entrepreneurial ability, and promoting the realization of the goal of "mass entrepreneurship and innovation".

## **1. Introduction**

With the development of the era and the deepening of higher education reform, innovation and entrepreneurship education in Chinese universities has gradually become the focus of theoretical research and practical exploration [1]. "Innovation and entrepreneurship education" needs the effective support of the curriculum to be implemented. In September 2021, the Guiding Opinions on Further Supporting Innovation and Entrepreneurship of College Students issued by The General Office of the State Council stressed that deepening the reform of innovation and entrepreneurship education in colleges and universities, improving the innovation and entrepreneurship education system in colleges and universities that integrates classroom teaching, independent learning,

combined practice, guidance and assistance, and cultural guidance, and enhancing the innovative spirit, entrepreneurial awareness and innovative and entrepreneurial ability of college students [2-4]. Strengthen the teaching ability and quality training of college teachers in innovation and entrepreneurship education, reform teaching methods and assessment methods, and encourage teachers to integrate cutting-edge international academic developments, the latest research results and practical experience into classroom teaching. As the main carrier and approach, the course "Fundamentals of Entrepreneurship" plays a key role in how innovation and entrepreneurship education is transformed from policy implementation to action and from theory to practice [5].

Based on the relevant research of entrepreneurship education courses at home and abroad, it can be seen that the systematic construction of the course is gradually promoted, the research of the course objectives is gradually deepened, the course content tends to combine theory and practice, and emphasizes the cultivation of students' knowledge, skills and values in various aspects [6]. But there are some problems: the theoretical foundation of curriculum system construction is weak; The analysis and grasp of curriculum objectives are weak, the grasp of curriculum objectives is not clear, lack of certain scientific [7]. The results of the research on the course content are relatively macro, focusing on cognition, with little in-depth content on students' emotions and abilities. As a result, the proportion of cognition, emotions and abilities in the course content selection is unbalanced, and the overall development of students in entrepreneurship education is ignored [8]. At the same time, at present, the teaching staff of entrepreneurship education in colleges and universities in China is weak, the practice place and environment are poor, the entrepreneurship course does not have designated textbooks and curriculum system, the entrepreneurship course still adopts the traditional teaching method, the students' main participation is weak, the students' interest in learning is low, and it is difficult to achieve the goal of cultivating students' innovation and entrepreneurship ability [9-10]. Therefore, this paper attempts to combine the concepts of Stimulate, Support, Search and Share 4S with the course objectives, reform and design the course content and teaching plan, and carry out practical exploration in Hebei GEO University, China. It provides new ideas and new methods for the construction and teaching of entrepreneurship-related courses in colleges and universities, promotes the innovative thinking and entrepreneurial ability of college students, and promotes the realization of the goal of "mass entrepreneurship and innovation".

## 2. 4S Concept Overview

The 4S concept (Stimulate, Support, Search, Share) is a general teaching concept derived from scholar Fu Rongji's process analysis on a number of successful innovative teaching cases, finding procedural rules from the commonality of these cases, and further refining the four elements of success [11]. That is, stimulate, support, search and share, and get the teaching concept suitable for "teaching for innovation". 4S concept is a kind of idea to guide the activities of teachers and students. It can be organically integrated with flipped classroom and blended learning, so that classroom activities are more clear and operable.

The main purpose of stimulating elements in 4S concept is to form a collision between learners' knowledge and the new knowledge that needs to be learned, so as to arouse learners' interest in learning and generate learning motivation. The role of supporting elements is to provide a supportive knowledge network for learners through the construction of interpersonal environment and physical environment. The elements of searching take works as the carrier of new knowledge combination, and the process of learners creating works is the integration of individual knowledge and group knowledge. Sharing elements means that learners show their works to others as much as possible, so as to achieve knowledge sharing in the group. In the teaching process, 4S four elements can effectively support the teaching process and guide the activities of teachers and students.

4S concept emphasizes that "teaching for innovation" is works-oriented, which promotes learners to face real knowledge application situations and solve problems in the industry. Moreover, works are related to learners' value realization, which increases the possibility of integration of learning process and innovation process. "Teaching for innovation takes innovation as the ultimate guidance, highlighting the realization of learners' innovative value and the sharing of tacit knowledge". According to the requirements of the situation, the four elements of 4S concept may also be intertwined and nested, becoming a more complex form.

### 3. Curriculum Objective Design

On the premise of respecting the individual learning needs of college students, the course "Foundation of Entrepreneurship" is designed in the three levels of basic knowledge, basic skills and practical ability. At the basic knowledge level, it helps students master the theoretical knowledge of entrepreneurship, understand the history, development, current situation of entrepreneurship education in China, as well as the basic concept, basic classification and significance of entrepreneurship. At the basic skill level, it helps students master the basic methods of entrepreneurship and form entrepreneurial thinking. At the level of practical ability, stimulate students' entrepreneurial motivation, correctly guide students to start businesses, enhance entrepreneurial ability, improve the quality of higher education personnel training, and better meet the needs of economic and social development. The course is divided into three teaching units, and the teaching objectives of the units are shown in Table 1.

Table 1: Details of the course unit objectives of "Foundation of Entrepreneurship"

Knowledge unit	Knowledge content	Goal hierarchy		
		Comprehend	Simple application	Comprehensive application
Foundation of entrepreneurship	The significance of receiving entrepreneurship education	√		
	The history and development of college students' entrepreneurship	√		
	The entrepreneurial advantage of college students	√		
	The basic types of entrepreneurship		√	
Entrepreneurial personality and entrepreneurial methods	The entrepreneurial personality classification	√		
	The analysis method of entrepreneurial demand			√
	The concept of team	√		
	The method of selecting entrepreneurial partners			√
	The connotation of business model	√		
Business plan and roadshow	The purpose of writing a business plan	√		
	The writing method of business plan			√
	The key elements of the roadshow		√	
	The entrepreneurial roadshow strategy	√		
	The entrepreneurial road show PPT production skills			√

## 4. Teaching Activity Design

The design of teaching activities is divided into four parts: stimulation, support, search and sharing, among which the stimulation strategies are divided into "problem stimulation" and "gamification stimulation". Support activities mainly include the support of interpersonal environment and materialized environment. The principle of support elements is to provide a series of resource lists for learners to achieve learning goals, requiring the form of resources to be as rich as possible, and providing personalized explanatory support for learners in the teaching process according to the learning content. At the level of search, it is required to be works-oriented. Teachers create exploration situations for learners and guide them to explore. At the sharing level, corresponding situations are created to organize learners to share dark knowledge, that is, to share experience, experience, etc., so as to achieve knowledge sharing. Taking the content of the first part "Entrepreneurship Foundation" as an example, the teaching process design under the 4S concept is carried out, and the specific teaching process design is as follows.

### 4.1. "Stimulate" Activity Design

Question stimulation in two stimulation strategies is adopted, and the question is set as: "Why should college students receive entrepreneurship education?" "What are the advantages of starting a business for college students?" The existing entrepreneurial knowledge of learners will collide with the new knowledge that needs to be learned, so as to arouse learners' interest in learning and generate learning motivation. Together with the students, we formulated learning goals and made it clear that the content of this course was works-oriented, and the final work was the "XXX Project Business Plan" throughout the entire teaching process.

### 4.2. "Support" Activity Design

The support provided to learners through the construction of interpersonal and materialized environments provides learners with a supportive knowledge network, which is freely chosen by learners according to their needs. Among them, the support of interpersonal environment includes intangible entrepreneurial knowledge support. Direct discussion with learners, interpretive dialogue, personalized entrepreneurial spirit, belief support. The construction of the physical environment provides learners with a rich list of resources, including content structure charts, micro-lessons, and video resources, and provides a list of electronic bibliographies for the course.

### 4.3. "Search" Activity Design

The exploration scenario created for learners in the form of homework: "Inquire about the innovation and entrepreneurship policy for college students in their hometown"; "Inquiring the process of college students' entrepreneurship"; "Make inquiries about products, stories, projects of interest". The exploration content set is based on the "XXX Project Business Plan" as the carrier of the new knowledge combination. Learners will explore the products, stories and projects they are interested in, understand the entrepreneurial process of college students and the policies of their hometown for college students' innovation and entrepreneurship, and lay the foundation for the completion of the business plan of the big work.

#### 4.4. "Share" Activity Design

Since "Entrepreneurship Overview" is the first part of the "Entrepreneurship Foundation" course, the content designed at the sharing level is "What entrepreneurial stories are around you?" Learners share their entrepreneurial stories with others, and share their exploration assignments on knowledge cards to achieve a personal experience of entrepreneurship, with personal beliefs, perspectives and values, experiences, intuitions, secrets, hunches and other knowledge.

### 5. Teaching Evaluation Design

#### 5.1. Grade Distribution

Total score of this course = 20% attendance score + 25% usual work + 55% completion work.

(1) Attendance =2 points \*10 times, late and early leave each time deduct 1 point, leave each time deduct 2 points, absenteeism each time deduct 4 points.

(2) Homework: 15 points for homework after class (knowledge card), 10 points for classroom homework.

(3) Final assignment: 30 points for business plan, 10 points for roadshow PPT, 15 points for roadshow video.

#### 5.2. Evaluation Criteria for Course Work

The course work includes three parts: classroom work, after-school work and final works. The work forms are divided into knowledge card, classroom work text, road show PPT, road show video and business plan. The assignment design is guided by the work of XXX Business Plan and combined with the content of each chapter. The evaluation criteria are as follows:

(1) Knowledge card evaluation criteria

The knowledge card is 5 times, each time the full score is 3 points, a total of 5\*3=15 points. The evaluation criteria are shown in Table 2.

Table 2: Knowledge card evaluation criteria

Evaluation index	Evaluation rules			Weight
	Outstanding	Up to standard	Below standard	
Submission time	Submit on time 1.5 points	Submit the work, but not in time 1 point	Unsubmitted the work 0 points	1.5
Card theme	Better achieve the goal 1.5 points	Basically achieve the goal 1 point	Miss the goal 0 points	1.5

(2) Evaluation criteria for classroom work

The class work is one time with full marks of 10. The evaluation criteria are shown in Table 3.

(3) Evaluation criteria for roadshow PPT

The PPT work of the road show is completed once, with a full score of 10. The evaluation criteria are shown in Table 4.

(4) Evaluation criteria for roadshow video

The video work of the road show is completed once, with a full score of 15. The evaluation criteria are shown in Table 5.

Table 3: Evaluation criteria for classroom work

Evaluation index	Evaluation rules			Weight
	Outstanding	Up to standard	Below standard	
Answer quality	More than 10 questions are relevant to the topic, and it is better to achieve the goal 5 points	6-9 questions to the topic, basically achieve the goal 3 points	Five of the following questions are relevant to the subject and do not meet the target 2 points	5
Answer quantity	Fill in 12 questions 3 points	Fill in 10-11 questions 2 points	Fill in 9 questions below 1 point	3
Format	Clear handwriting, standard format 2 points	Generally clear handwriting, standard format 1 point	The format and handwriting are confused 0 points	2

Table 4: Evaluation criteria for roadshow PPT

Evaluation index	Evaluation rules			Weight
	Outstanding	Up to standard	Below standard	
Theme	The template matches the theme 2 points	Templates are theme-free and concise 1 point	The template does not match the theme 0 point	2
Structure	Complete structure and clear logic 3 points	The structure is complete and the logic is not clear 2 points	The structure is incomplete and the logic is not clear 1 point	3
Content	Rich and substantial content 3 points	The content is complete, but not full 2 points	The content is incomplete and not detailed 1 point	3
Language	Accurate and fluent language 2 points	The language expression is smooth 1 point	Scientific error 1 point	2

Table 5: Evaluation criteria for roadshow video

Evaluation index	Evaluation rules			Weight
	Outstanding	Up to standard	Below standard	
The beginning and the end	There are both beginning and end 2 points	There is only beginning or end 1 point	No beginning and end 0 point	2
Sound picture	Video sound and picture clear 4 points	There is less noise, and the picture and lens have less shake and blur 3 points	Large noise, the picture quality is not clear, and the lens shakes violently 1 point	4
Content logic	Full content, clear logic, smooth speech 6 points	There is logic, but the content and presentation are not smooth 4 points	The speech was illogical and incomplete 2 points	6
Emotional expression	Rich body language, strong language appeal 3 points	There's a certain body language and a certain infectivity 2 points	No body language, infectivity is not strong 1 point	3

## 6. Conclusions

Based on the characteristics of entrepreneurship courses in domestic colleges and universities, this paper puts forward a curriculum plan for entrepreneurship courses in domestic colleges and universities based on 4S concept. Taking the "Foundation of Entrepreneurship" course of Hebei GEO University as an example, the course teaching reform design was carried out, and the application effect of the course scheme was studied to provide new ideas and new methods for the construction and teaching of innovation and entrepreneurship courses in relevant universities, so as to enhance the innovative thinking and entrepreneurial ability of college students and promote the realization of the goal of "mass entrepreneurship and innovation".

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## Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

## Conflict of Interest

The author states that this article has no conflict of interest.

## References

- [1] Lou, T.Y., Jiang, W.B., Wang, X.Z. (2023) *Construction and practice of first-class courses in entrepreneurship foundation*. *Sichuan Labor Security*, (04): 87-88.
- [2] Lv, X. (2023) *Research on the practice of basic curriculum of innovation and entrepreneurship*. *Knowledge Window*, (01): 123-125.
- [3] Tian, Q.L., Liu, Z.H., Yang, B. (2023) *Exploration and practice of mixed teaching mode of "college students' entrepreneurship foundation" course*. *Heilongjiang Education*, (01): 51-54.
- [4] Li, L., Li, S.N. (2022) *Exploration and application of ideological and political elements in the course "foundation of entrepreneurship"*. *Journal of Science and Technology Entrepreneurship*, 35(12): 97-100.
- [5] Xu, P.G., Wang, X.W., Yang, J.X. (2022) *Teaching innovation design and practice of "foundation of innovation and entrepreneurship" course*. *Theoretical Research and Practice of innovation and Entrepreneurship*, 5(12): 24-27.
- [6] Yang, L.M. (2022) *Exploration and countermeasures of ideological and political connotation of "foundation of innovation and entrepreneurship" course*. *Industry and Technology Forum*, 21(08): 174-175.
- [7] Yang, X.P., Wang, L.P., Zhang, X.B. (2020) *Research on the teaching method of interactive experiential ecological large class of "foundation of innovation and entrepreneurship" course*. *Journal of Handan Vocational and Technical College*, 33(01): 69-73.
- [8] Yang, L., Wang, W. (2019) *Practice and reflection on participatory teaching reform of entrepreneurship basic course*. *Modern Vocational Education*, (16): 88-89.
- [9] Cheng, S.L. (2017) *Research on the development of "foundation of entrepreneurship" curriculum based on deepening innovation and entrepreneurship education reform*. *Times Education*, (23): 79-81.

- [10] Zheng, Y.Y. (2017) *Research on the teaching Status and improvement of the course "foundation of entrepreneurship" in colleges and universities. Modern Communication, (09): 137-139.*
- [11] Pei, C.Y., Yang, J.H., Mi, J.H. (2023) *Application design of 4S concept in innovation and entrepreneurship curriculum. Shanxi Youth, (06): 83-85.*