

Cultivation and Promotion Strategies of Art Students' Innovation and Entrepreneurship in Higher Vocational Colleges

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Abstract: With the development of higher vocational education in China, innovation and entrepreneurship education is an inevitable choice. It is an important measure for deepening the teaching reform of higher vocational education and cultivating students' practical ability and innovation and entrepreneurship in China. The innovation and entrepreneurship education of college students has been raised to an unprecedented height. Comprehensiveness is a professional feature of the art and design profession. It integrates technicality and professionalism. It further strengthens the cultivation of the innovative spirit and entrepreneurial ability of the art design students. It is of great significance for art and design graduates to adapt to job development needs and improve their innovative driving ability.

1. Introduction

"Innovation and entrepreneurship education is a kind of teaching concept and model that meets the needs of economic society and national development strategy. It is of great realistic significance and long-term strategic significance to vigorously promote innovation and entrepreneurship education in colleges and universities in order to promote the scientific development of higher education, deepen education and teaching reform, and improve the quality of personnel training." Entrepreneurship education in Chinese universities is still in its infancy, and most entrepreneurship education in higher vocational colleges still remains at the cognitive level. It is at the stage of finding employment for students and lacks rational understanding and effectiveness of entrepreneurship education [1-3]. Organizations have not effectively formed the model for fostering entrepreneurial talents in vocational colleges. Therefore, to carry out entrepreneurial education and to cultivate the talents with entrepreneurial awareness, entrepreneurial ability and innovative spirit in order to adapt to the needs of socialist economic construction is an important issue to be studied and solved urgently in the cultivation of talents in higher vocational schools. Implementing

innovation and entrepreneurship education and cultivating innovative talents are important measures for deepening the teaching reform of higher vocational education and cultivating students' ability to practice operations and innovation and entrepreneurship [4-6]. The article explains the importance of innovation and entrepreneurship education in the art design profession of higher vocational colleges in China, from the three aspects of the construction of the curriculum system for the students of art and design majors in innovation and entrepreneurship, the teaching strategies for the cultivation of innovation and entrepreneurship, and the innovation and entrepreneurship platform for the art and design profession, this paper discusses the cultivation and promotion of innovative and entrepreneurial talents in the art design profession [7-8].

2. Art and Design Students' Innovation and Entrepreneurship

Cultivating the curriculum system and constructing innovative education is a kind of process education. Through all-round creative education process and the growth of students, we cultivate innovative talents; innovation education is a kind of quality education for all students; innovation education is a kind of education that emphasizes both results and processes; innovation education is to tap potential, hatch innovation and personality. Cultivating students' innovative awareness, innovative spirit and entrepreneurial ability are their main goals and core contents. Higher vocational art design education also includes entrepreneurship education. Therefore, the goal of talent training in higher vocational art designing is skilled and applied talents. The cultivated students should not only meet the talent requirements of the front-line positions in the social industry, but also meet the post requirements for the long-term development of the society. For this reason, art and design major courses must incorporate innovation and entrepreneurship education to form a talent cultivation system with innovative ability. Among them, the curriculum setting should be directly linked to employment and entrepreneurship goals and be implemented in specific positions. This requires educators to reform curriculum content and teaching methods, pay attention to the comprehensiveness of knowledge and ability, focus on the ability of innovation and entrepreneurship in the curriculum setting of the art and design major, and emphasize professional skills and professional knowledge in teaching. The goal of personnel training is to comprehensively cultivate students' innovation and entrepreneurship and professional and technical capabilities. According to the overall orientation of personnel training, in the setting of the curriculum, we must embody the basics (humanistic quality and professional accomplishment), practice (strengthening the training of experimental training sessions), and innovation (improvement of comprehensive ability and innovation and entrepreneurship). We must also fully consider the cross-cutting nature of the course content, increase the setting of general education courses, and add compulsory courses and elective courses to the public basic course education so that it is conducive to cultivating students' innovation and entrepreneurship and entrepreneurial management capabilities, strengthening the introduction mechanism of innovation and entrepreneurship teaching. In the three-year professional art design professional teaching process, we must consciously inject students with innovative awareness training and business model training courses, including first-grade general education, second-grade professional skills education, and third-grade experimental training education, combining "entrepreneurship education with innovation activities, integration with entrepreneurial guidance activities, and integration with campus cultural activities." It actively explores innovative and entrepreneurial experiments and training activities for students at all levels, implementing normalized teaching management, and developing students' learning habits in a subtle manner. The innovation and entrepreneurial talent training model must be highly integrated among general education, professional skills cultivation, and comprehensive quality building. Its core lies in the cultivation of innovative and entrepreneurial talents through the

cultivation of students' overall quality [9-11].

3. The Teaching Strategy of Cultivating Creative and Entrepreneurial Ability of Art Design Students

(1) The spirit of innovation and entrepreneurship education that infiltrates classroom teaching with the courage to challenge and dare to explore is the spirit of innovation. People with innovative spirits are often able to grasp opportunities with sensitivity and speed. The comprehensive utilization of cognitive ability and practical ability is innovation ability, which mainly includes observation ability, thinking ability, hands-on ability, communication ability, and collaboration ability. The creativity of students needs to be cultivated, and the imagination needs to be stimulated. Only through open teaching content can students' creative thinking be cultivated. The teaching content of professional courses can not only stay in the knowledge of course materials, but also should broaden the teaching content and improve students' professional knowledge and innovative thinking in many aspects. The first is to closely link with the industry, increase related practice and evaluation courses, allow students to understand and clarify the requirements of the industry's job quality. On the one hand, effectively improve the directionality and efficiency of learning. On the other hand, make the training of school personnel more in line with the needs of the industry. Second, by strengthening the connection between the school and the industry, teachers are consciously introducing industry hotspots and development trends in the classroom teaching process, and actively guiding students in professional courses, keeping abreast with the development direction of the industry. The third is aimed at students' professional practice teaching, emphasizing professionalism and proficiency, actively developing professional cross-border training, and broadening the horizon of professional skills. Fourth, "producing, researching, and researching" inquiring learning entered the classroom, changed "push" into "citation", stimulated students' motivation for independent learning, and tapped their creativity and innovation ability. Fifth, innovate classroom teaching forms, and use the Internet network teaching platform to facilitate teacher-students to carry out immediate teaching interactions. For example, teachers of Nanjing Institute of Industry and Technology use a blue ink cloud class teaching platform. The teaching process has achieved very good results and students' enthusiasm for learning has greatly improved [12-13].

(2) Project introduction course teaching for higher vocational project teaching, the selection of projects is a key issue. Direct participation in various competitions is an effective way to obtain real projects and keep pace with market orientation. Therefore, it is important to pay attention to all types of competitions as an important task for teaching. Through the content of the competition, the students' creative thinking has been improved, and at the same time, they have achieved comparatively outstanding results and won various awards at various levels. The project-based teaching model is a feasible way to improve the students' innovative quality, innovative thinking and innovative ability. The direct introduction of real projects of the enterprise into the classroom can achieve deep cooperation of "schools, enterprises, and businesses" and foster education through collaboration. From projects directly introduced by companies, teaching and industry needs can be synchronized. Emphasizing students' creative ability and innovation consciousness is the focus of art and design professional education. The practicality, individuality and artistry of products are the life of design works. Therefore, the project-based off-campus practice teaching has become an important part of the student's design ability training. In the process of participating in the real project of the enterprise, the student undertakes the project independently, the teacher leads at the key position at the right time, and stimulates the student's active and active participation, resulting in invisible In order to achieve the purpose of innovation and entrepreneurship education.

(3) Taking teaching reform as an opportunity to increase the intensity of teaching reform and innovation Nanjing Institute of Industry and Technology has been deeply involved in various topics at all levels of the professional curriculum teaching content. Through the deepening of the project, not only has the students improved their professional culture, broadened their creative design thinking, but also cultivated their innovative abilities. The students have achieved remarkable results. The works designed by the students in the depth of the subject not only obtained national appearance patents, but also obtained national utility model patents. This is a full recognition of the students' innovative abilities, which greatly stimulates the students' innovative spirit.

4. Construction of Innovation and Entrepreneurship Practice Platform for Art Design Students

The Creative Marketplace is an emerging communication model emerging from the creative industry development process. It provides an open and diverse creative ecological environment and trading platform. It provides a stage for individuals of all styles to show their personal charisma and stimulates the individual's creativity and innovation. This paves the way for creativity and industry, and it is a practical stage for creating ideas and commercializing creative works. The Creative Marketplace provides a good platform for practical teaching of art and design. It integrates this creative market into the classroom teaching of professional art design in higher vocational education, making it an extension of practical teaching in professional classrooms, enabling students to master the entire process of design and production. Therefore, effectively complete the students' comprehensive ability training and the cultivation of innovative awareness and entrepreneurial ability. More importantly, in the course of the "Creative Marketplace" course, we can learn a set of product design and development programs, which become the means and experience of future business, and also become a solid foundation for higher vocational art design graduates to embark on a new path of self-employment and brand creation. Students in Nanjing Institute of Industry and Technology Art Workshop participate in activities of various Creative Marketplace. For example, the "2016 Nanjing Creative Design Week" theme, sponsored by the Propaganda Department of the Nanjing Municipal Government's Municipal Party Committee, allowed citizens to walk into colleges and universities to experience creativity. The "Qixia Red Maple Festival Fair" sponsored by the Propaganda Department of Qixia District of Nanjing and the creative collection market of Ganxi's former residence. Students prepared hundreds of works, products in short supply, and received customer orders. The success of the market has greatly stimulated the motivation of students to learn and prompted them to work consciously in the studio to work overtime. This not only improves the utilization rate of the studio, but also creates a good atmosphere for independent learning. The Creative Marketplace was the first large-scale trial of the teaching results of Nanjing University of Technology's School of Art and Design. The success of the market demonstrated that students' innovative ability was recognized, attracted the attention of investors, and marketed the students' creative works, laying channels to create exhibition space. The design and creation work of the art design students' courses not only participate in the activities of the creative bazaar and accept the judgment of the market, but also use the online trading platform to test the market. For example, Zhejiang Walan Cultural and Creative Co., Ltd. is a one-stop public creative platform with flower design, pattern trade, and fabric printing. There are tens of thousands of domestic and foreign designers, and they face the global fabric design market. Buyers fancy the works on the Internet directly with the designer for sale, there is no qualification restrictions, no start-up capital restrictions, no threshold limit, only use the works to speak. This is a very good display platform for students. The company's professionally-employed corporate teachers are experts in the industry and teach printing product design courses at the school. During the

course of the course, he led the students of the textile design professional to open studios on the Walan platform one after another. According to statistics, at present, the students of the School of Art and Design of Nanjing Vocational and Technical College have opened 55 individual studios. Studios have a total of 693 patterns (200 RMB on average) and 46 buyouts (average 450 RMB), where the best-selling student has exceeded 40,000 RMB in revenue on this platform a year. Students who learn in the classroom can generate income and promote their professional enthusiasm and innovation. Employ specialists who are familiar with the market trends in the industry field to provide professional guidance, and students can easily and quickly produce results. The economic benefits also directly encourage students to take the initiative to study further and form a strong atmosphere of self-directed learning. The result is to continuously affirm and improve students' innovative ability and form a virtuous cycle of "learning, innovation, re-learning, and innovation". Therefore, the construction of the innovative and entrepreneurial ability training practice platform for art design students is the best way to effectively realize the cultivation of innovative and entrepreneurial talents.

5. Analysis of the Status Quo of the Creative Entrepreneurial Ability of Higher Vocational Art Students

The basic idea of exploratory factor analysis is to group the original variables according to the size of the correlation, so that the correlation between the variables in the same group is higher, and the correlation between the variables in different groups is lower. Each group of variables represents a basic structure and is represented by an unobservable comprehensive variable. This basic structure is called a common factor. Factor analysis is a statistical method to find potential factors, and it is an effective data dimensionality reduction method. This article uses SPSS 22.0 software to count and analyze the results of the questionnaire, and conduct a t test. The t-test formula used in this article is as follows:

$$t = \frac{\bar{X} - \mu}{\frac{\sigma_X}{\sqrt{n}}} \quad (1)$$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad (2)$$

1. At the level of innovation awareness

The KMO value of the dimension validity test of innovation consciousness is 0.791, the validity is good, and it is suitable for factor analysis. Steep slope Figure 1 shows that starting from the second component, the slope becomes slower, so the first two common factors are considered. As shown in Table 1, the factor analysis matrix has an explanatory rate of 68.633%, and the load value of each item is the same as the common factor. The degree meets the requirements, the number of questions for each factor is greater than 3, and the load of each question is greater than 0.4 for only one factor.

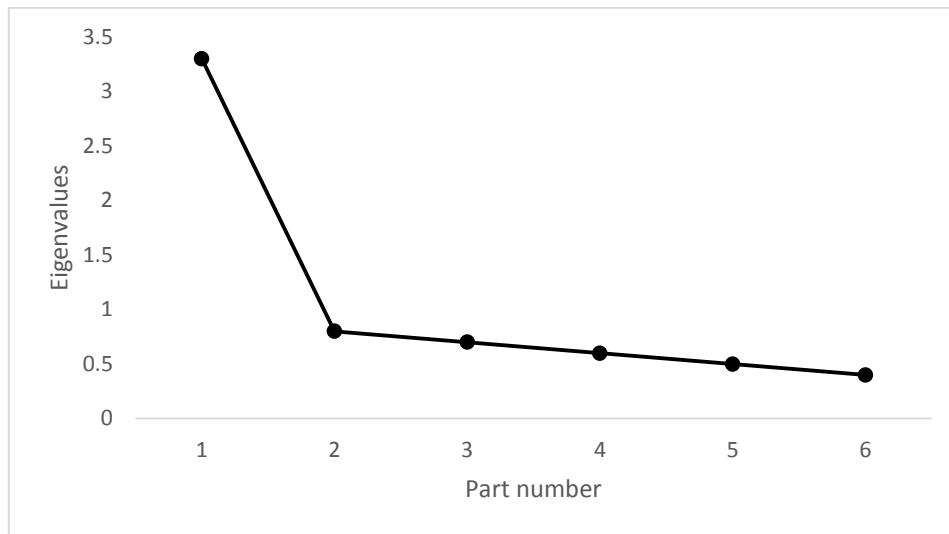


Figure 1. Steep slope of innovation awareness

Table 1. Analysis results of innovation awareness factors

Question number	factor		Degree of commonality
	1	2	
C31	.825		.714
C32	.818		.742
C24	.728		.654
C27		.857	.752
C26		.847	.764
C25		.657	.513
Eigenvalues	3.547	0.945	
Explanation rate (%)	53.057	15.845	68.901

It can be seen from Figure 1 and Table 1 that the first common factor includes C31 "Innovative Services Needed", C32 "Service Process Innovation", and C24 "Achieving Industrial Integration", which can be summarized as service innovation consciousness; the second common factor including C27 "Realize Opportunity Innovation", C33 "Develop Creative Products" and C25 "Discover Creative Opportunities" can be interpreted as a sense of opportunity innovation. Opportunity innovation awareness refers to the attitude and behavioral ability to find, explore, evaluate, and use opportunities, determine a market for innovation or technology, and create new ideas for products or services.

2. Descriptive statistical analysis of innovative entrepreneurial ability of students with different skills in higher vocational colleges

Through the statistical method of descriptive analysis, the innovative entrepreneurial ability and various dimensions were tested. Based on the students of two colleges and universities, the overall situation of the college students was analyzed. Calculating the weighted average of innovative entrepreneurial capabilities through the weighted average method is to multiply the weights of each dimension of the first-level indicators by the average of each dimension, and then sum up to get the weighted average of innovative entrepreneurial capabilities. The result is shown in Figure 2. (The letters on the abscissa in the figure indicate: Innovative entrepreneurship, Basic ability, Comprehensive ability, Innovative mind, Entrepreneurial awareness, Learning ability, Professional competence, Grass the market ability, Organizational management ability, Service innovation ability, Opportunity innovation awareness, Entrepreneurial spirit, Entrepreneurial motivation)

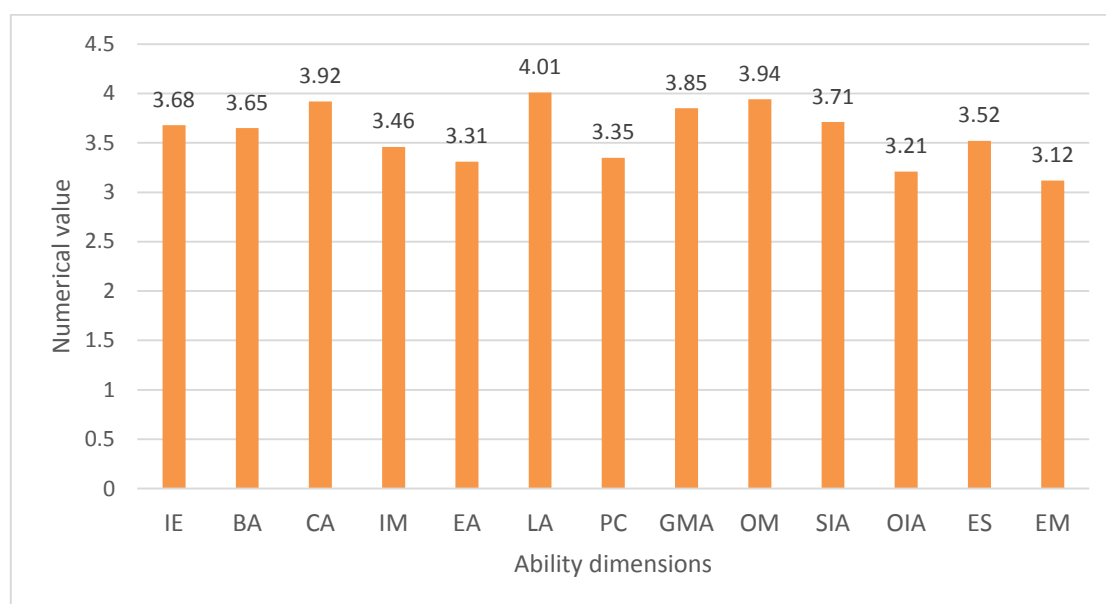


Figure 2. Descriptive analysis of various dimensions of innovative entrepreneurial capabilities

It can be seen from the figure that the overall average number of college students' innovative entrepreneurial ability is 3.68, which is at a medium level, indicating that the overall innovative entrepreneurial ability of college students is average. The averages of the four dimensions in the first-level indicators from high to low are comprehensive ability (3.92), basic ability (3.6735), innovation consciousness (3.46), entrepreneurial consciousness (3.31). It shows that college students generally have comprehensive abilities and relatively high basic abilities, but lack the sense of entrepreneurship and innovation. In innovation awareness, the average value of opportunity innovation awareness is significantly lower than service innovation awareness. With the development of the new economy, the current service industry is developing rapidly. College students have a better understanding of some emerging business models and service models, and they have more involvement in the market. The new service is more personal experience. However, college students are not sufficiently sensitive to innovative entrepreneurial business, are not able to seize business opportunities promptly and quickly, and have relatively poor ability to carry out opportunity innovation.

6. Summary

The cultivation of innovative talents for art design majors in higher vocational colleges requires educators to continuously study and practice them conscientiously, and scientifically construct talent training channels to make them diversified, specialized, and unimpeded. In order to meet the needs of the development of cultural and creative industries, exploring and fostering innovation and entrepreneurship ability of high-quality excellent design talents and channels. We need to carefully study and continue to explore. Only by insisting on innovation and entrepreneurship education at the same time, can vocational arts and design students complete their professional knowledge in the school - to cultivate innovative ideas - to practice their own self - to achieve employment and entrepreneurship - to embark on a social learning process. We can cultivate the popular, distinctive, powerful and high-quality design talents for the society to meet the needs of the market economy for art design professionals in the new situation.

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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.

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