

Ways and Approaches to Cultivate Students' Creative and Entrepreneurial Ability in Art and Designing

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Abstract: Innovation and entrepreneurship education has become a double focus of theoretical research and practical research in China's higher education and is considered as In the “Third Education Passport” of the 21st century, innovation and entrepreneurship education is an objective need to build an innovative country, improve education and teaching quality, and relieve employment pressure. Knowledge Economy Era and Industry The 4.0 era has brought about major changes in higher education. The innovative social form of advocating individualization, customization, digitalization, and sharing requires a large number of innovative and entrepreneurial talents. Fine arts colleges have the inherent advantages of innovation and entrepreneurship education, and are innovative and entrepreneurial. Talent training, technology transfer and results transformation have established close links with socio-economic development. Based on this background, this article starts with the fine arts and design majors of art academies, and aims at the current status of contemporary art and design innovation and entrepreneurship education. Through theoretical analysis, comparative analysis, and empirical analysis, this paper combines the reality of fine arts and design to explore innovative entrepreneurship education. The organizational model and operating mechanism, optimizing the art and design innovation and entrepreneurship education system, exploring the new development model of innovation and entrepreneurship education with the characteristics of art and design professional , and finally put forward the strategic direction of innovation and entrepreneurship education of the art and design professional.

Introduction

Innovation and entrepreneurship education has developed into an important part of art management under the art theory and is an important part of the study of higher education. Especially in recent years under the guidance of the national innovation-driven development strategy, the concept of innovation and entrepreneurship has been universally recognized, and innovation and entrepreneurship education in universities has achieved unprecedented development. Many colleges and universities in China have successively established innovation and

entrepreneurship colleges, which include innovation and entrepreneurship education in the entire process of personnel training. Innovation and entrepreneurship education is a brand-new education concept and education model based on quality education. In recent years, it has become a hot topic both at home and abroad for theoretical research and practical research. The innovation and entrepreneurship education of college students emphasizes the unity of knowledge and action, emphasizing the comprehensive development of students, and conforms to the new demands of education for the development of the times. With the development of the global entrepreneurial economy and the intensification of international competition, countries around the world have gradually adopted innovation and entrepreneurship education as an important way to promote economic development and improve the quality of education. Fine arts and design majors in art academies are highly compatible with innovation and entrepreneurship education. Starting from the rules for the cultivation of fine arts and entrepreneurial talents, it is proposed to construct an innovation and entrepreneurship education model that is unique in the characteristics of fine arts and design, and is an innovation and entrepreneurship education model. Helpful supplements.

1. The Meaning of Art and Design to Carry Out Innovation and Entrepreneurship

1.1. Theoretical Significance

First of all, the innovation and entrepreneurship education model of art and design is the weak link in the current theoretical research on innovation and entrepreneurship education in colleges and universities. To make in-depth discussions on this issue, not only to meet the theoretical needs of the development of the times, but also to update the traditional education concept of the cultivation of fine arts and design professionals. At the same time, it innovated the theory of education, provided a theoretical basis for the innovation and entrepreneurship practice and school decision-making departments for students of art and design, and provided an effective way for the quality education of art and design and the implementation of innovation and entrepreneurship education.

Second, the study of innovation and entrepreneurship education in fine arts and design The theoretical value is actually the reform of educational theory. A large number of researches at home and abroad have focused on innovation education and entrepreneurship education. There are few researches on integration of innovation and entrepreneurship education. Research in this area can expand the theoretical extension of innovation and entrepreneurship education. The dissertation tries to construct the innovation and entrepreneurship education model of art and design specialty, and explore the coupling mode of innovation and entrepreneurship education and professional education, which has certain theoretical value.

1.2. Practical Significance

First of all, from the perspective of promoting the full employment of graduates, innovation and entrepreneurship education is the fundamental project to achieve "to promote innovation." The problem of employment of college students is a long-term strategic issue, especially in recent years, "artificial exam fever" caused by "employment difficulties." To change the traditional education and teaching thinking, we should not limit our attention to the employment of university students. We should position our goal as an innovative talent that can adapt to society and take the initiative to open up opportunities for entrepreneurship. We can use employment to stimulate employment and relieve employment pressure.

Second, from the point of view of serving the country's innovation drive, innovation and entrepreneurship education is an important way to cultivate innovative entrepreneurial talents. Universities are an important part of the national innovation system and the main body of innovation. Art schools are increasingly taking on the important functions of social services, and using innovation and entrepreneurship education as an opportunity to promote the reform of education and practice of fine arts and design, making it a bridge and link between government, business, society and universities.

2. Design Goals and Principles of Innovation and Entrepreneurship Education in Domestic Fine Arts and Design Majors

2.1. The Overall Objective of Art and Design Professional Innovation and Entrepreneurship Education

Art and Design Major Innovation and Entrepreneurship Education is Knowledge Economy The inevitable trend and important opportunities in the context of the development of the generational and cultural industries. However, the goals of innovation and entrepreneurship education in the art and design profession are obviously different from those in other comprehensive universities. Although comprehensive universities also pay attention to the improvement of students' innovation and entrepreneurial accomplishment, they also value the students' complete knowledge system and comprehensive qualities. The art and design majors are dedicated to fine arts education and professional practice. Therefore, they pay more attention to the cultivation of innovation awareness and entrepreneurial ability, especially how to use the knowledge-based entrepreneurship of fine arts specialty. Art and Design Major Innovation and entrepreneurship education is the process of developing students' potential for innovation and entrepreneurship. It is also an education to cultivate students' innovation and entrepreneurial awareness and entrepreneurship. Therefore, the overall goal of the innovation and entrepreneurship education of the art and design major is to train the college students to become composite art talents who can adapt to the changes in the society of Duhui and have certain innovative and entrepreneurial qualities and technological entrepreneurial abilities.

2.2. Layered Target Art and Design Professional Innovation and Entrepreneurship Education

The connotation of innovation and entrepreneurship education in the art and design profession is rich, not only to teach students to start, manage and manage companies, but also to cultivate the innovation and entrepreneurship of the students of the Academy of Fine Arts. Consciousness, innovation, entrepreneurship, psychological quality and other comprehensive qualities to meet future career development. Even if a student does not start a business after graduation, he or she can use his own innovation and entrepreneurial accomplishments to create a career in future jobs. This is the ultimate goal of innovation and entrepreneurship education for students of fine arts and design that we have repeatedly emphasized. Therefore, art and design professionals to improve innovation and entrepreneurship education includes both general education under the background of comprehensive literacy, it is also included in the future to enhance the vocational field of competitiveness and resilience, as well as the overall quality of education, including respect for the creative personality of students carried out .

2.3. SIFT Algorithm

The SIFT algorithm has the invariance of multiple characteristics, and each comprehensive performance is the most robust feature point.

Rotation invariance is one of the important properties of the SIFT descriptor. The SIFT algorithm determines its main direction by counting the peaks of the histogram of the gradient direction in the neighborhood of the key point.

By extracting feature points and generating descriptors for art and innovation and entrepreneurship capabilities, a subset of descriptors that characterize features can be obtained. By calculating the similarity of two different descriptors, it can be judged whether the two descriptors are related. The SIFT algorithm measures the similarity of two descriptors by calculating the Euclidean distance between the descriptors.

Assume that the two description subsets are $S = \{S_1, S_2, S_K, S_M\}$ and $Q = \{Q_1, Q_2, Q_K, Q_M\}$

Among them, the Euclidean distance of $S = (s_{i1}, s_{i2}, K, s_{i128})$ and $Q = (q_{i1}, q_{i2}, K, q_{i128})$ is:

$$d(S_i, Q_i) = \sqrt{\sum_{l=1}^{128} (s_{il} - q_{il})^2} \quad (1)$$

Not every feature point descriptor has a corresponding correct matching descriptor, so the nearest neighbor method will get a lot of mismatched pairs. The SIFT algorithm adopts a more reasonable method, using the ratio of the nearest neighbor to the next nearest neighbor distance as the basis for judging the correct matching pair, the formula is as (2):

$$\text{Distance to first match} / \text{Distance to second match} < \text{Threshold} \quad (2)$$

For mismatched pairs, due to its randomness, the distance between the nearest neighbor and the second nearest neighbor is usually closer, while for a correctly matched pair, the nearest neighbor distance and the second nearest neighbor distance are more likely to have a larger gap. The SIFT algorithm can take into account the correct rate and the number of correct matching pairs by setting a reasonable nearest neighbor ratio and second nearest neighbor threshold, and obtain a more ideal matching result.

2.4. System Design Principles and Content

Traditional education is dedicated to cultivating comprehensive talents for the all-round development of morality, intelligence, fitness, beauty, and labor. Innovation and entrepreneurship education is based on traditional education and focuses on cultivating creative talents with innovative ideas, entrepreneurial abilities, and entrepreneurial spirit. A new education concept. The innovation and entrepreneurship education system and the traditional education system are mutually independent and mutually infiltrated. Therefore, the innovation and entrepreneurship education of the art and design major must rely on the knowledge structure and ability provided by traditional education to cultivate the knowledge structure, entrepreneurial ability and innovation quality of the talented people in the entrepreneurial society. At the same time, the traditional education advocates social responsibility and is willing to open up new ideas. The spirit of progress can be used as a growth gene for innovation and entrepreneurship education.

3. Art and Design Students to Develop Innovative Ways to Explore the Entrepreneurship

In order to explore how to cultivate the creative and entrepreneurial ability of art and design

students, this article conducted an online questionnaire survey. The main content of the questionnaire involved includes the construction of management team, the cultivation of research and innovation capabilities, the participation of social practice, and the views on incentive mechanism measures. A total of 150 art and design students and teachers were surveyed in this article. Among them are 50 teachers and 100 fresh professional students. Invite students and teachers to fill out an online questionnaire together. 148 questionnaires were effectively collected. According to the analysis of the questionnaire results, the following table is drawn:

In Table 1, we can see that there are 18 teachers who think that the cultivation of research and innovation ability is very important. Of course, the construction of education team is also very important. Only a good teacher is good for friends. For students, the cultivation of innovative research ability and participation in social practice are particularly important. 37% of people think that innovation in thinking is the most important, followed by practice, accounting for 29% of the students surveyed.

Table 1: Teachers and Students' Support for Innovative Ability Training Methods

	Management Team	Research and Innovation Capabilities	social practice	Innovation Incentive Measures
Teacher	12	18	14	6
Student	20	37	29	14

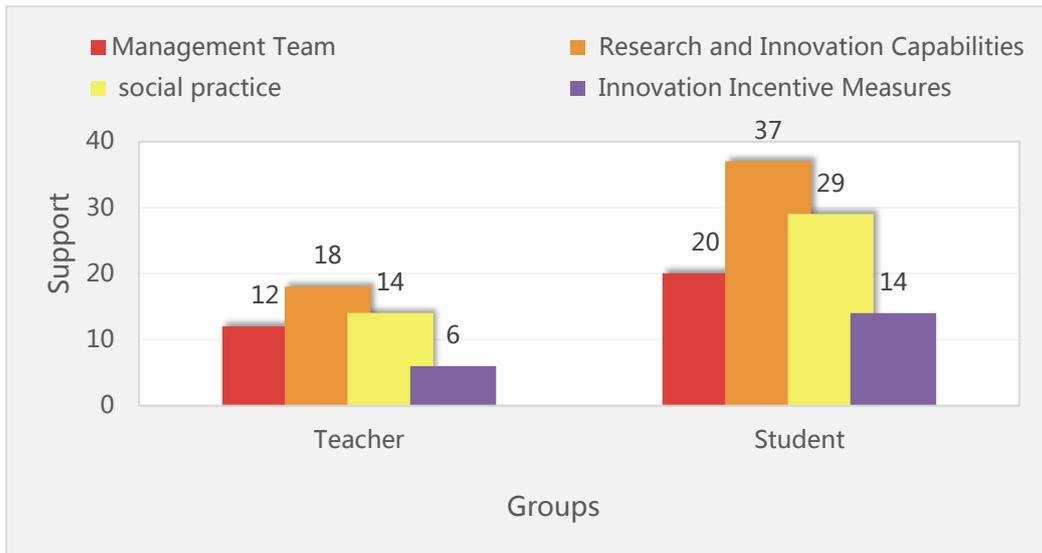


Figure 1: Teachers and Students' Support for Innovative Ability Training Methods

As shown in figure 1, students pay more attention to research and innovation capabilities and social practice. At the same time, teachers also think research and innovation capabilities are important in cultivating students' innovative capacity. And they all hold the importance of management team. There are 13% of people believe that the cultivation of innovation and entrepreneurship capabilities requires financial incentives to support.

To sum up, paying more attention to the construction of management team, the foster of research and innovation capabilities, the enrichment of social practice and the support of financial incentives

is necessary.

3.1. Strengthen the Construction of Management Team

To effectively strengthen the construction of teaching management teams, the main leaders of schools, colleges, and departments should always go deep into the front lines of teaching, and timely understand, research, and solve new problems and new problems that emerge in undergraduate art teaching work through lectures and symposiums with teachers. . In the evaluation of the leadership team, it is necessary to regard whether or not the undergraduate teaching work is really important as an important basis and standard for measuring the work level of the party and government groups at all levels of the school. The college should attach importance to the selection of the vice president of teaching and the allocation of the teaching secretary, and fully support the work of the vice president. To effectively improve the ideological quality, business level, and service quality of management personnel, it is necessary to establish a regular training system for the teaching management team. It is necessary to stabilize and optimize the teaching and management team through measures such as prioritizing further studies, editing, and gradually increasing job allowances, and constantly improve its age structure, professional structure, and education structure. College to take appropriate measures to stabilize and optimize the teaching management team, adjustment of hospital vice president in charge of teaching candidates seeking the views of school leaders, adjusting teaching hospital secretary and laboratory managers should be consulted Dean and equipment and Laboratory Management, respectively .

3.2. Foster the Research and Innovation Capabilities of Art and Design Students

How to cultivate the research and innovation ability of students majoring in art design? This article also designed a corresponding questionnaire to conduct a survey, and the results obtained are shown in Figure 2:

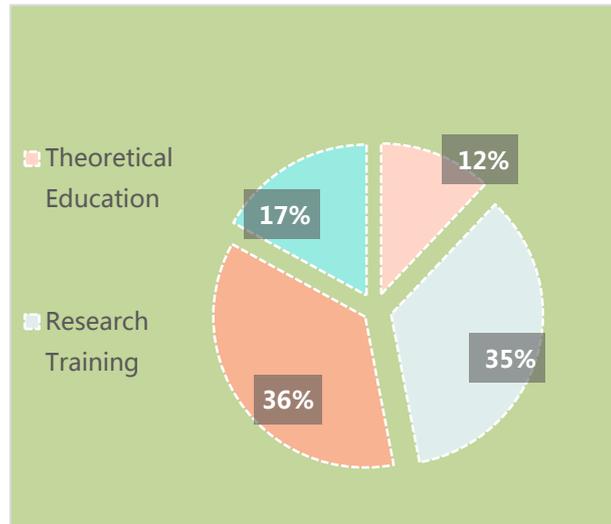


Figure 2: Ways to Develop Research and Innovation Capabilities

From figure 2, we can conclude that 36% of people believe entrepreneurship practice is the most important part, followed by scientific training, and 35% believe that scientific research training is the foundation and the key. Only by laying a good foundation can there be fewer mistakes in the

entrepreneurial process.

In accordance with the regulations governing student competitions in colleges and universities, we must intensify innovation education for fine arts and design students and actively rely on the first classroom to comprehensively promote research training, entrepreneurial practice, science and technology competitions, and humanistic literacy enhancement and professional skills for fine arts and design students. Second class activities such as training, continuously improve the quality and quantity of innovation and entrepreneurship training programs for fine arts and design universities, and actively organize and apply for innovation and entrepreneurship training programs for undergraduate students at the national and provincial levels. Further improve the scientific research management system for university students, increase policy efforts and capital investment, and strive to mobilize the enthusiasm of teachers in guiding student scientific research and academic competitions and other scientific and technological innovation activities, and actively guide and guide students to participate in teacher research projects or student independent topic research. We must actively explore the management of "diversification of dissertation projects" and accelerate the improvement of credit certification and curriculum replacement management methods in art colleges. We must strive to create an educative atmosphere that is "self-reliant, diversified and comprehensive," and encourage students to actively participate in innovation. Entrepreneurial activity.

3.3. Complete Art and Design Students of Social Practice and Community Activities

Do a good job of organizing and guiding the collection of short-term semester art activities, social studies of the music department, and the social practice activities of the summer college students. Continue to carry out teaching activities for fine arts and design students, expand the content of social practice, and participate in social practice. The activities are integrated with the top job internships to allow our students to have more exposure to all walks of life, contact society, understand the national conditions, and enhance their sense of social responsibility and mission. Community activities are an important form of enriching the arts and designing students' life after class, improving their own quality, and opening up the second classroom. They are also important bases for students to temper their growth and become talents. Therefore, we must further intensify policy guidance and support, strengthen the extension and connotation construction of student organizations, and allow more students to broaden their horizons, accept exercise, cultivate sentiment, and improve their ability in excellent organizations.

3.4. Improving the Innovation Incentive Measures for Fine Arts and Designers

For a long time, everyone has adopted the criteria of assessing students with a good grasp of knowledge, especially good academic performance. This concept has been questioned by employers for their feedback on "high scores and low energy." Each school must broaden the evaluation ideas according to its actual situation, reform teaching effectiveness evaluation methods and teaching evaluation systems, and pay attention to the students' spirit of innovation, personality development and comprehensive ability evaluation. Establish a comprehensive quality assessment system that is conducive to the development of students' individuality, and change the test scores as the sole criterion for measuring teaching results. The examination methods can be diversified. Students' performance can be assessed in various forms such as large-scale assignments, live performances, course papers, designs, or open books. Not only that, but also highlighting the innovative factors for students' appraisal and selection activities. Encouraging to innovate and obtain better innovation

results are the most important criteria for assessment and evaluation.

4. Conclusion

With the rapid economic development, the demand for art and design students in the society is not limited to the knowledge of theoretical knowledge alone, but more is the demand for talents in practical application ability. College art and design majors must change their own schooling concepts, and must adjust their talent training objectives and plans based on their own teaching characteristics, students' student source conditions, and social needs. At present, there is a large demand for applied art talents in the society. Therefore, college art and design majors must adjust the curriculum structure, enhance practical teaching, and pay attention to cultivating students' hands-on abilities, application abilities, and innovation abilities. Gradually building students' knowledge, abilities, and qualities is beneficial to them. Comprehensive and coordinated development of talent training model. This can not only enhance the service capacity for the development of social economy and culture, but also improve the survivability of college art and design majors in fierce competition in universities.

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