Analysis on the Current Situation of Education and Cultivation of "Innovation and Entrepreneurship-Oriented" Art Talents under the Background of Big Data

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Abstract: Driven by big data technology, the education and training of "innovation and entrepreneurship-oriented" art talents is very important for the development of art education and the promotion of cultural industry. The purpose of this article is to deeply analyze the current situation of "innovation and entrepreneurship-oriented" art talent education and training under the background of big data. In this article, the relevant information is widely collected and studied from the aspects of policy, technology, industry environment, curriculum system, teaching methods, teaching staff and practical teaching. The results show that although the current "innovation and entrepreneurship-oriented" art talent education and training has been explored, the curriculum is out of touch with the needs of the times, the teaching methods are limited to the traditional model, teachers are short of big data knowledge and innovative practical experience, and practical teaching also has shortcomings in resources and activity organization. It is concluded that it is necessary to optimize the curriculum system, innovate teaching methods, improve teachers' level, and strengthen practical teaching, so as to meet the training needs of "innovation and entrepreneurship-oriented" artistic talents in the era of big data and promote the innovative development of art education and cultural industry.

1. Introduction

At the moment when the digital wave is surging, big data has penetrated into all fields of society in an unprecedented situation, which has had a profound impact on traditional art education [1]. In this context, the education and training of "innovation and entrepreneurship-oriented" artistic talents has become the focus of art education. The so-called "innovation and entrepreneurship-oriented" artistic talents are artistic professionals with innovative thinking and entrepreneurial ability. It is of key significance to promote the development of art industry and enhance cultural soft power [2]. From a social perspective, with the vigorous rise of the cultural industry, the market demand for "innovation and entrepreneurship-oriented" artistic talents is growing [3]. The era of big data has brought about changes in artistic creation, communication and consumption patterns, which requires artistic talents to flexibly use big data technology, innovate artistic expressions and open up the art market [4]. In terms of education, the traditional training mode of artistic talents, faced with the impact of big data, has exposed some problems, such as outdated curriculum system and single teaching method, which has been difficult to meet the requirements of the new era for "innovation and entrepreneurship-oriented" artistic talents [5]. Therefore, it is an urgent task for the reform and development of art education to deeply analyze the current situation of "innovation and entrepreneurship-oriented" art talent education and training driven by big data.

The purpose of this study is to reveal the reality of "innovation and entrepreneurship-oriented" art talent education and training under big data, find out the existing problems and deficiencies, and provide theoretical basis and practical guidance for the subsequent education reform. Its significance lies not only in optimizing the art education system and improving the quality of artistic talents training, but also in helping the cultural industry to achieve innovation and development in the era of big data and enhance the national cultural competitiveness. With the

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theoretical analysis method, from the perspectives of pedagogy, art and other disciplines, this article deeply discusses the internal laws and external influencing factors of the education and training of "innovation and entrepreneurship-oriented" artistic talents.

2. Big data and "innovation and entrepreneurship-oriented" art talents education theory

In the field of education, big data technology provides accurate basis for educational decision-making by collecting and analyzing all kinds of data generated in the teaching process [6]. "Innovation and entrepreneurship-oriented" artistic talent is a new product of art education adapting to the development of the times. Its connotation includes not only solid artistic professional skills, but also innovative thinking and entrepreneurial ability [7]. Innovative thinking requires artistic talents to break through the shackles of traditional concepts and create art from a unique perspective; Entrepreneurial ability refers to the ability to transform artistic works into commercial value in the art market. "Innovation and entrepreneurship-oriented" artistic talents should have keen market insight, good communication and cooperation skills and tenacious entrepreneurial spirit.

On the theoretical basis of education and training, the constructivist learning theory emphasizes the active constructive role of learners. In the cultivation of "innovation and entrepreneurship-oriented" artistic talents, students are encouraged to actively explore and find problems, build their own knowledge system and cultivate innovative thinking under the rich resource environment provided by big data [8]. The theory of innovative education focuses on cultivating students' innovative consciousness, innovative ability and innovative personality. With the help of big data technology, innovative education channels can be broadened, such as analyzing art market data and guiding students to grasp the direction of artistic innovation.

3. Big data and "innovation and entrepreneurship-oriented" educational environment

(1) Policy environment

In the era of big data, the state and local governments have attached great importance to the education and training of "innovation and entrepreneurship-oriented" art talents and issued a series of supporting policies [9]. These policies guide the rational allocation of art education resources from the macro level, and encourage universities and various art education institutions to carry out innovation and entrepreneurship education. By setting up a special fund, the government supports the cooperation between art colleges and enterprises to carry out art practice projects related to big data, and provides a practical platform for "innovation and entrepreneurship-oriented" art talents. In terms of talent introduction policy, the government gives preference to artistic talents with big data skills and double innovation ability to attract them to join art education and industrial development.

(2) Technical environment

Table 1 Application of Big Data Technology in Art Education Links

Art Education Link	Application of Big Data Technology	Challenges Faced
Teaching Content Design	Adjust course content based on market data, such as adding big data art analysis courses	Difficulty in data screening and integration
Teaching Method Implementation	Track students' learning behaviors through online learning platforms and provide personalized guidance	Teachers' varying levels of technical application ability
Practical Teaching	Simulate art creation and market operation scenarios using virtual simulation technology	High technological costs

Big data technology has brought many opportunities and challenges to the education and training of "innovation and entrepreneurship-oriented" art talents. Big data analysis can mine information such as art market trends and consumer preferences, help students accurately locate the direction of artistic creation and enhance the market adaptability of works [10]. For example, using image recognition technology to analyze the audience feedback data of art exhibitions can help students

understand the public aesthetic tendency. The application of big data technology requires art educators to master new teaching tools and methods. Online education platform realizes personalized learning path planning with the help of big data, but some teachers lack the application ability of this technology. The following is a concrete analysis of the application of big data technology in all aspects of art education (see Table 1).

(3) Industry environment

With the development of the era of big data, the demand for "innovation and entrepreneurship-oriented" talents in the art industry has changed significantly. The traditional art industry continues to integrate big data technology for transformation and upgrading, and emerging art formats such as digital art and interactive art are booming. Taking digital art as an example, its creative process relies on big data algorithms to generate unique works of art, which requires artists to master big data-related skills such as programming in addition to artistic literacy. The marketing model of the art market has also changed due to big data, and precision marketing has become the mainstream. Artistic talents need to use big data to analyze consumer portraits and formulate targeted marketing strategies. According to relevant surveys, in the past five years, the demand for "innovation and entrepreneurship-oriented" talents with big data skills in the art industry has increased by more than 20% annually, which shows that the demand for such talents in the industry is extremely urgent.

4. Current situation of art talent education and training

(1) Curriculum system

At present, most universities are trying to integrate big data and double innovation into the curriculum system of "innovation and entrepreneurship-oriented" art talent training, but there are still many problems. On the one hand, there is a lack of organic integration between courses, and big data-related courses and art major courses are independent of each other, failing to form a synergistic effect. On the other hand, the double-creation courses are mostly theoretical lectures, lacking close integration with artistic practice. Table 2 is the statistics of curriculum in some colleges:

Table 2 Curriculum Setup for "Innovation and Entrepreneurship-Oriented" Art Talent Cultivation in Some Universities

College Name	Proportion of Art Major Courses	Proportion of Big Data-Related Courses	Proportion of Innovation and Entrepreneurship Courses	Curriculum Integration Status
College A	70%	10%	20%	Big data and art courses only combine in few projects; innovation courses lack practical training.
College B	75%	8%	17%	Big data electives are loosely linked to art; innovation courses focus on theory.
College C	68%	12%	20%	Course integration is initial and unsystematic; innovation practical resources are scarce.

(2) Teaching methods

In terms of teaching methods, traditional lecture teaching still occupies a dominant position. Although some universities have introduced case teaching, project teaching and other methods, the effect in cultivating students' innovative ability is limited. The selected cases in case teaching are not updated in time, which fails to fully reflect the new changes in the art industry in the era of big data. In project teaching, the project sources are mostly virtual or simulated, which is out of touch with the actual art market demand. In the teaching of some art design projects, although students

have completed the design task, they lack a deep understanding of how to use big data to conduct market research and accurately locate the target customer groups.

(3) Teaching staff

The teaching staff is the key factor affecting the quality of "innovation and entrepreneurship-oriented" artistic talents training. At present, among the teachers in art colleges, compound talents who know both art and big data technology and double innovation practice are scarce. Most teachers have been focusing on the art field for a long time, lacking knowledge about big data and practical experience in double innovation. This makes it difficult for teachers to effectively integrate big data technology into art teaching in the teaching process, and it is also impossible to give students practical and innovative guidance.

(4) Practice teaching

Practice teaching is an important link in cultivating "innovation and entrepreneurship-oriented" artistic talents. However, at present, there are some problems in practical teaching, such as imperfect construction of practical platform and single form of practical activities. The practical teaching in most universities is still dominated by studios and laboratories on campus, and the cooperation with off-campus enterprises is not deep enough, so it is difficult for students to get in touch with real big data art projects and market operation environment. Practical activities are mostly concentrated in artistic creation, but less involved in innovative and entrepreneurial practice such as art market research and marketing promotion, which is not conducive to students' comprehensive improvement of their innovative ability.

5. Analysis of existing problems

(1) Curriculum issues

The disconnection between the curriculum system and the needs of the big data era and the dual-creation education is more serious. The course content is updated slowly, which fails to reflect the new application and new trend of big data in the art field in time. Although some universities offer big data-related courses, they only briefly introduce concepts and lack in-depth application explanations. In the aspect of dual-creative education, the courses focus on theoretical knowledge teaching, and lack of project training closely combined with artistic practice. Fig. 1 is an analysis of the curriculum setting issues in different types of universities:

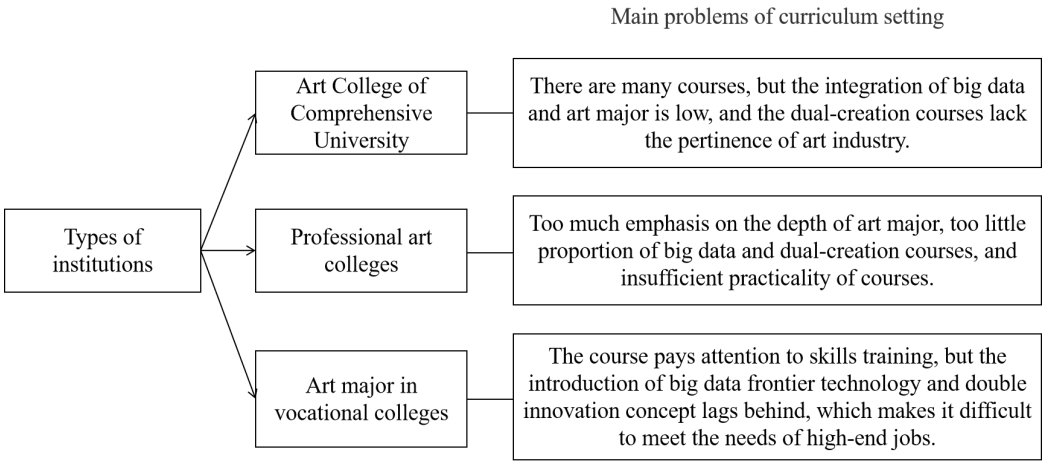

Figure 1: Art talent curriculum issues

(2) Limitations of teaching methods

Traditional teaching methods have many shortcomings in cultivating the ability of double innovation. In the teaching mode based on lecture, students passively accept knowledge and lack active thinking and innovative exploration. The old cases in case teaching can't reflect the new changes and challenges of the art industry driven by big data. Although there are practical links in project teaching, the project is virtual, which is far from the real market demand.

(3) Teacher shortage dilemma

Teachers' lack of big data knowledge and practical experience in double innovation has become the bottleneck of talent training. Most art teachers have been focusing on traditional art teaching for a long time, and they have insufficient knowledge of big data technology, so it is difficult to integrate it into the curriculum. In the practice of double innovation, teachers lack artistic entrepreneurial experience and can't provide practical entrepreneurial guidance for students. Some teachers can't accurately analyze market risks and opportunities because of their own experience limitations when guiding students' entrepreneurial plans.

(4) Shortcomings in practical teaching

There are obvious problems in practical teaching resources and practical activity organization. The practical teaching platform is mostly confined to the campus, and the cooperation with off-campus enterprises is not deep and wide enough, so students have few opportunities to contact real big data art projects. The form of practical activities is single, mainly focusing on artistic creation, ignoring key links such as art market operation and marketing. Although students can create works of art, they lack the ability to use big data for marketing and business model construction.

6. Conclusions

This article focuses on the current situation of "innovation and entrepreneurship-oriented" art talent education and training under the background of big data. In the analysis of its policy, technology and industry environment, it is found that although the policy has guidance, the application of technology faces challenges, and the demand for talents in the industry has changed significantly. From all aspects of education and training, the unreasonable curriculum system, traditional teaching methods, insufficient ability of teachers and weak practical teaching links are prominent. The curriculum fails to closely combine the characteristics of the era of big data with the requirements of dual-innovation education, and there is a lack of organic integration between courses and dual-innovation curriculum practice. In terms of teaching methods, the traditional teaching-oriented model inhibits students' innovative thinking, and case and project teaching fails to meet the actual needs. In terms of teachers, teachers' lack of big data knowledge and practical experience in double innovation greatly limits the improvement of teaching quality. Practice teaching can't meet the needs of cultivating "innovation and entrepreneurship-oriented" artistic talents because of imperfect platform construction and single activity form.

To sum up, in order to improve the quality of "innovation and entrepreneurship-oriented" art talent training, we must first optimize the curriculum system, increase the deep integration of big data and art, and double-innovation practical courses. Secondly, innovative teaching methods are adopted to stimulate students' innovative thinking. Furthermore, strengthen the construction of teaching staff and improve teachers' ability of big data and double innovation practice. Finally, strengthen practical teaching, expand the off-campus practice platform and enrich the content of practical activities. Through the above improvement measures, art education will be better adapted to the development of the era of big data, and more high-quality "innovation and entrepreneurship-oriented" art talents will be delivered to the cultural industry, so as to promote the vigorous development of the art industry in the wave of big data.

References

[1] Chen Fang, Hu Xi, Li Fang. Reflections on the Education System for Sports Applied Talents Based on the Cultivation of "Mass Entrepreneurship and Innovation" Capabilities [J]. Journal of Wuhan Institute of Physical Education, 2020, 54(05): 70-74+87.

[2] Jing Pengfei, He Lina, Song Ruibo, et al. Exploration on the Integration of Professional Courses and Innovation and Entrepreneurship Education in Local Applied Undergraduate Colleges and Universities [J]. China Higher Education, 2021, (24): 47-49.

[3] Jiao Xingtao. Exploration of the "Art+" Talent Model in Higher Art Education on the New

Journey of Chinese-style Modernization [J]. China Higher Education, 2023(5): 18-21.

[4] Qian Chen, Wang Ruimin. Reform and Practice of Talent Cultivation in Higher Vocational Art and Design Based on the OBE Educational Philosophy [J]. Vocational and Technical Education, 2021, 42(23): 45-48.

[5] Zhang Zhendong. Research on the Modern Transformation and Development of Art Education in the Context of New Liberal Arts [J]. China University Teaching, 2022(10): 82-89.

[6] Wang Yun, Cui Caixia. Research on the Problems and Countermeasures of Talent Cultivation in the Major of Aviation Service Art and Management [J]. Theory and Practice of Education, 2023, 43(9): 18-21.

[7] Zhang Lanfang, Xiao Mei. Reflections on the Discipline Construction and Talent Cultivation of Music Education in Normal Universities in the Context of New Liberal Arts [J]. Art Criticism, 2023(10): 59-73.

[8] Xiao Shilong, Zhang Tiantian, Xu Lei. Research on the Cultivation of Digital Art Talents in Art and Design Majors in Colleges and Universities under the Background of Tea Culture [J]. Tea in Fujian, 2020, 42(12): 130-131.

[9] Feng Yong, Zhong Jiang, Wang Qian, et al. Research and Practice on the Cultivation of Big Data Intelligent Talents Based on Collaborative Intelligence Integration [J]. China Educational Technology, 2021, (04): 16-25.

[10] Liu Boheng, Cao Xuetong, Zhou Wen. Exploration on the Cultivation of Interdisciplinary Talents in the Digital Media Art Major [J]. China Higher Education, 2020, (22): 51-53.