

The transformation of art design education brought about by VR technology in the digital age

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Abstract: The development of science and technology has brought digitization in various fields, and the digitalization of education has been rapidly popularized. The main purpose of teaching art design is to enable students to master the theoretical knowledge and practical operation ability related to art design and promote Students have the enthusiasm, participation and initiative of lifelong learning. By applying VR technology to the actual teaching life, the actual effect of teaching can be enhanced. The existence of VR technology will give quite a lot of possibilities and unknowns in the future. The students of art design majors should be able to cultivate their ability to analyze stereoscopic space in the process of learning, and the existence of VR technology is exactly This ability can be effectively cultivated, and combined with the software to display on the classroom, students will further study the learning space analysis and explore the space modeling creative thinking.

1. Introduction

Among the universities in China, the number of students is increasing. The expansion of students requires the reform and development of teaching technology in China's education field. VR technology is one of the teaching techniques of development and research. VR technology appeared earlier, but its actual operation and the use of equipment have great limitations, while the lack of software and the actual requirements of general users are not high, leading to VR technology in the field of education. It is hard to be taken seriously. In the process of continuous digitization in all aspects of social life and work, the field of education is no exception. The existence of VR technology has successfully changed the teaching methods and systems of art education design in the past, so that students can improve the concentration of learning. In an immersive way to participate in the study of art design-related courses, to enable students to build a virtual environment, and carry out substantive operations to enhance the interactive learning. This paper analyzes the art design education based on the digital age and proposes the application of VR technology in art design education in this era.

2. Current status of VR technology art design education in the digital age

The art design profession itself has practical operability, flexibility of thinking and creativity, which are also reflected in the curriculum. In the digital age, the current development of VR technology has entered the field of art design teaching in China, and the form of its teaching is undergoing a tremendous transformation. The past multimedia teaching methods have gradually failed to meet the growing knowledge needs of students and must be carried out. The transformation of teaching methods can continuously improve the quality of art design education [1].

First of all, VR equipment and technology cannot be introduced and used in all colleges with art design. Although the current price of VR equipment continues to decline, it still exceeds the psychological expectations of colleges and universities. There is no way to apply these devices, and most colleges lack awareness and awareness of the use of VR devices. There is no promotion of VR technology as one of the important contents of teaching work [2].

In some colleges and universities, the importance of VR technology to the art design profession is not fully understood, resulting in insufficient attention to the technology, and it is impossible for VR technology to fully exert its reform role in teaching methods and teaching models. It is only that the current teaching technology and teaching methods can meet the current teaching needs and talent

training needs, which also leads to the unsustainable promotion of VR technology in the art design profession [3].

3. The necessity of applying VR technology to art design in the digital age

At present, digitalization has been realized in various fields, and the degree is also constantly deepening. In the art design education, the traditional teaching mode can not meet the needs of current talent training needs and training objectives. In the past teaching methods, due to space, time, and limitations of teaching tools and models, it is difficult for students to fully mobilize their subjective ability and subjectivity, and teachers cannot comprehensively and meticulously describe each art design. Many problems in the process. The use of VR technology for the teaching of art design courses can further solve problems such as less teaching tools and inspiration for students, and improve students' understanding of art design [4]. In the process of teaching with VR technology, many concepts of illusion in the mind can break through the limitations of the real environment, materials and production costs, and be realized in a virtual environment, so that students' imagination and creativity can be observed. The design principles are fully utilized.

4. The opportunities and challenges brought by the integration of art design education and VR technology

(1) Opportunities brought by the integration of art design education and VR technology

First of all, the integration of VR technology and art design education can ensure the further visualization of the teaching process, and enable students to enhance their innovative thinking in this immersive environment, bring more artistic inspiration, and effectively enhance students' enthusiasm. To promote some of the more difficult to understand and Abstract.content to be reproduced by VR technology.

In addition, it can improve the learning efficiency of students and enhance the effect of learning. The existence of VR technology can improve students' immersion and improve students' immersive experience of learning. Under such circumstances, students can fully devote themselves to learning virtual environment, which improves students' attention. The degree of power and attention allows students to effectively promote their learning efficiency to another level under such circumstances [5]. At the same time, it enables students to convert the teaching content of the teacher into the knowledge content that they need to master, so that students can integrate the theoretical knowledge learned into the reality in the VR virtual environment, and carry out the process, method and design of the teaching. Optimization, guarantee the improvement of teaching quality, and encourage teachers to achieve the goal of talent cultivation to a great extent.

Once again, it is able to effectively reduce the cost of education. Some of the works of art are scarce resources. Not all students are exposed to such scarce resources. By applying VR technology in the field of art design education, students can be guaranteed contact with such resources while reducing resources. The series of costs brought about can also be repeated in virtual reality for some phenomena that are irreversible in the real situation, enhancing the impression of students.

(2) Challenges brought by the integration of art design education and VR technology

At present, some companies have carried out research and development on the integration of VR technology and teaching, and many policies also tend to encourage the use of VR technology in the field of education. As a result, it has become an indispensable part of art design education. The trend of reversal. However, the current China is still in a stage of exploration in the research and development and application of this design. In the process of exploration, it faces many difficulties and problems. There is no way for the art design profession to do whatever it wants. Use VR technology.

The first is that the technology is not perfect and mature. The immersive experience of the teaching equipment that can be provided to colleges and universities is currently poor. There is no way for students to fully immerse themselves in it, and there are big problems in the research and development of equipment, such as comfort. The lower, debugging process has relatively

complicated situations, and there are large gaps in technical standards, which are material obstacles that VR technology can develop in the teaching field [6].

In addition, at present, China has promoted quality education, especially in the face of the cultivation of students, it is of great significance to be able to develop and explore the potential, interest and initiative of students' learning. Talents to be cultivated in the art design profession must have a variety of abilities, such as hands-on practice, imagination, and ability to innovate. However, the methods and methods in the process of teaching art design in colleges and universities are complemented, the curriculum is not highly targeted, and there is a serious lack of content in the content design of teaching using VR technology [7]. There is no way to fully grasp the knowledge of the entire discipline of art education design by VR equipment. It is only the VR technology that can be used for a certain course or a series of teaching content. In the actual teaching process, the cost of designing and customizing teaching content is too large and exceeds the range that can be tolerated.

Finally, there is a phenomenon of standard inconsistency in the manufacture of VR equipment, and there is no regulation. In the art design education, the requirements for innovation and space re-creation of teaching are high, and the VR equipment of different standards often affects the actual operation and effect of teaching. In addition, VR equipment is more complicated to use, and teachers use it. It is necessary to further adapt and study in order to apply it to teaching.

5. The application of VR technology in art design education in the digital age

VR technology itself is highly creative, virtual and interactive, so it can be used flexibly in the art design teaching, such as situational teaching, computer simulation and many other methods. In the traditional teaching methods, teachers usually use computers to display pictures of some works, and broadcast audio or video to students, but it is difficult for art design students to put their own three-dimensional thinking. Build. However, the existence of VR technology can effectively enhance the three-dimensional sense of the displayed items, and even construct the environment in which the entire item or even the item is displayed in reality, and present it completely and clearly in front of the students [8].

(1) Analysis of the teaching objectives of art design professionals

VR technology has many limitations in the field of art design education, mainly because there are not many different teaching contents that can be suitable for art design education. Therefore, it is necessary to design some art design courses that can adapt to the current VR technology, so that teaching The content will not be out of touch with the cultivation of talents. According to the current ability, level and various conditions that students already have, the planning and goals of talent cultivation are carried out. According to the students' learning characteristics, personality characteristics and ability level, the teaching talents are determined, and according to the teaching objectives, The design of the teaching design is carried out. Through the integration of VR technology and art design, the goal of the art design talents is to enable students to construct spatial stereoscopic thinking, practical operation ability and innovative creativity. Through VR technology, the cultivation of art design talents can be improved. The goal is achieved [9].

(2) Carrying out the design of teaching tasks combined with VR technology

The teacher should design the teaching task according to the student's future employment direction, personality characteristics and the required knowledge and skills, so that the students can complete the teaching task through VR technology according to the teaching task. In the process of completing the teaching task, it is necessary to be able to effectively complete the training tasks and goals of the art design talents, and clarify the tasks to cultivate the abilities and qualities of the art design students, and let the students clearly recognize which tasks can be used. To VR technology, it is suitable to use virtual simulation or to complete in the actual situation. It can construct the virtual environment of teaching, and students can transfer their divergent thinking through interaction. In the context of such a virtual environment, students can complete their teaching tasks and interact with their own personality characteristics and learning needs, which further lays a good foundation for the construction of the VR system teaching platform.

(3) Construction of VR Technology Simulation Laboratory

The basis for determining the teaching task is to combine the composition, function and system of the teaching system with VR technology and teaching, further integrate the teaching resources, and promote the art design students to be able to measure their own innovative thinking and ability. Combining the VR device with the current database and new media will effectively construct a virtual reality teaching environment. The VR Technology Policy Lab can cooperate with enterprises to introduce high-level VR equipment and technology in the enterprise, enabling enterprises to provide platform support and talent support, and hire professional engineers to expand VR technology. The application of art design in the field of expertise, but also in the school to provide computer, network and other basic equipment, and give a certain economic support for the construction of VR technology simulation laboratory [10].

(4) Designing and teaching evaluation of the teaching process

Due to the particularity of VR technology itself, it is necessary to change the original way of teaching after introduction, in order to fully integrate VR technology with the use of teaching. It is necessary to redesign the teaching links, such as the order and arrangement of the courses, as well as the modes and methods of teaching. At the same time, it is necessary to set up emergency countermeasures for the problems that may occur in the teaching process of VR technology. Teachers can still use the original teaching method, VR teaching technology as an auxiliary means, can use VR technology to reproduce some works, to enable students to intuitively observe and form a complete three-dimensional space design thinking. It is also necessary to evaluate the students' urinary culture as a standard for evaluation. It is found that the students' adaptability to the VR technology and teaching integration process and the final effect of the teaching, find the deficiencies in the learning process, and can also correct the teachers. Improve the teaching ability by using various teaching problems in the process of VR technology.

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