

Research on Digital Media Application Technology Course System Based on Vr Technology

Chaolin Li¹, Haofeng Li², Mingyao Zhang¹

¹Sichuan University of Media and Communications, Chengdu, Sichuan, 611745, China

²Tianfu New Area General Aviation Profession Academy, Chengdu, Sichuan, 610222, China

Keywords: Vr technology, Digital media application technology major, Curriculum system

Abstract: Now that the teaching reform work is constantly advancing, teachers in various professional disciplines are exploring new teaching methods. Digital media application technology is a new professional discipline born in the development of the information age. Teachers can use virtual reality (VR) technology to teach in some course content according to the characteristics of the profession in the teaching process. VR technology is a new method of human-computer interaction. Relying on computer software technology and the latest sensor technology, the course content and VR technology are effectively combined. The immersive method is used to optimize the course content, and a more intuitive learning experience is provided to cultivate new Provide a guarantee for a generation of application-oriented and compound talents. This article will explore the characteristics of digital media application technology courses and discuss how to introduce VR technology.

1. Introduction

At present, VR technology has been widely used in various fields such as medicine, entertainment, military aerospace, interior design, real estate development, industrial simulation, emergency deduction, cultural relics, education and teaching. It has very broad development prospects in different fields. It has its uniqueness. Therefore, in order to give full play to the role of VR technology in the course of the development of digital media application technology professional courses, it is also necessary to grasp its professional characteristics, do a corresponding technical transformation and optimize the subject curriculum system.

2. Digital Media Application Technology Major

At present, many colleges and universities in China have set up digital media application technology majors, which intersect multiple disciplines.

This professional knowledge content is relatively rich, involving different disciplines and arts such as education, culture and business, so it has the characteristics of intersection.

First, from the aspect of media technology, it has different technical contents such as human-computer interaction website development and digital audio processing. In terms of art, it includes different contents such as color, sketch, audio-visual language and so on.

Second, the profession is committed to cultivating innovative talents in the process of cultivating talents. Because most digital media products must have excellent ideas before they can be noticed.

Third, the profession is oriented towards practical talents and applied talents in the process of talent training. It is committed to creating more practical opportunities for students and enabling them to have innovative capabilities based on solid theoretical knowledge.

Therefore, this major has rich social needs and a wide range of knowledge. In the process of building the curriculum system, the school can create unique courses based on local characteristics and its own teaching resources. [1]

As a new major in the information age, the digital media application technology major focuses on cultivating talents for information visualization and interactive design and production. It has the

characteristics of art and technology integration, and its connotation and the content of virtual reality research have the characteristics of integration. . So from a certain perspective, this profession is closely related to VR technology. Both digital media technology and digital media art combine visual expression and computer software technology. Considering that the traditional media in China is currently changing the trend of development due to the needs of the times and developing towards the integration of media, the connection between mass users and media has also changed. The emergence of VR technology under this change has also promoted the development of VR technology. Therefore, VR technology can enable people to receive information more intuitively, timely and accurately, and bring students different experiences of traditional learning resources. If you can combine the professional of digital media application technology with VR technology and take advantage of VR technology, you can realize more intuitive communication with the real world on the basis of virtual space. This method can break the barriers of traditional information understanding and communication, accelerate the speed of information understanding, and thus improve the efficiency of information interaction. Therefore, in order to allow students to better understand the course content and establish a course system that is more in line with the training of a new generation of applied talents, professional content and VR technology should be combined.

3. Vr Technology

With the rapid development of VR technology, it has gradually become a highly accepted way of interaction. It can use computers to virtualize the real world, allowing people to see and feel the real world.

The emergence of VR technology has affected the traditional digital media technology, while also adding more new positions, such as VR senior development engineer, user interface designer and so on. This has also expanded employment to a certain extent and increased the job market. As of 2020, China's scarcity of VR talent has reached about 800,000. In the new era, VR senior development engineers have also become a highly paid profession. [3]

At present, although many colleges and universities have opened digital media application technology majors, there are still many imperfections in the curriculum system, and they are still in the initial development stage. Some schools will imitate the courses of other majors when they set up courses, which are not in line with the training requirements of talents. Because at this stage, a qualified digital new media professional needs to have a wealth of solid professional theoretical knowledge and practical ability. Taking these characteristics into consideration, colleges and universities must adjust the construction of the curriculum system. They can learn from other countries 'curriculum setting models, and adjust to the appropriate positions and the innovation of positions according to the domestic talent development needs. [4]

4. Fourth, the Use of Vr Technology to Build the Requirements of the Curriculum System

In order to give full play to the role of VR technology in the process of professional teaching, teachers also need to improve their teaching level and strengthen talent training in the process of developing digital media technology application specialties. This requires teachers to have a certain aesthetic literacy and technical foundation. Only in this way can they better carry out courses and strengthen the guidance of students. In this way, students can quickly upgrade their skills after receiving education guidance and quickly adapt to the development needs of society.

In addition, in the process of professional teaching, it is necessary to increase the interaction with VR technology, and make up for the shortcomings and differences of traditional teaching in the process of interaction. VR technology is a new way of media circulation. If it can be effectively applied, it can play the flexibility and freedom of the virtual world, thereby better promoting the construction and development of professional courses. In the process of learning, students can also learn to use VR technology to seize its advantages and give full play to their creativity.

When using VR technology to build a curriculum system, we must grasp the characteristics of

the profession, rebuild the teaching system in the process of practice, and strive to improve students' innovation and practical ability.

5. Construction of Curriculum System Based on Vr Technology

On the basis of VR technology, schools can divide professional courses into different course modules, allowing students to choose these modules after learning basic courses.

The first is the public basic curriculum, which has to learn different forms and policies, ideological and political education, entrepreneurship education, mental health education and other different contents, these are to train students to become a qualified social person.

The second is professional basic courses, which include PS, Java, network foundation and other components. Through the study of professional basic courses, students can have basic professional qualities and master the general ability of the computer industry.

Finally, there are professional courses. Students can choose different learning directions arbitrarily according to their learning situation or interests. These include advanced development technology of VR technology, practical drills of VR technology, front-end development and interactive technology, etc. These professional courses can further improve the professionalism of students.

In the process of teaching digital media application technology, in order to create more practical opportunities for students, a virtual reality curriculum practice platform can be established. With the support of VR technology software, students can participate in the practice of the platform to consolidate the existing knowledge and extend more new knowledge. For example, in the process of practical teaching, teachers want to make students in a more natural and realistic experimental environment, they can use PC terminals to connect external devices, so that a deep interactive system of virtual environment can be established. At present, many universities' digital media application technology majors have used VR technology to build virtual reality practice platforms, developed many technological innovation projects, and obtained rich research results. Among them, the virtual driving system and the three-dimensional virtual apartment are the hot research projects currently focused on.

Therefore, on this basis, teachers can directly let students use virtual reality practice platforms to carry out thematic interior design, packaging design and so on. This process should not restrict students, let students use their imagination, design works according to their own ideas, and display their works through this platform, so that students can more intuitively recognize their shortcomings and advantages.

In the course of professional courses, VR technology can be applied in many aspects, which can enrich the content of the classroom and strengthen interaction on this basis. Therefore, universities can set up VR laboratories to start from this aspect and establish virtual teaching environments. Because VR technology has strong interactivity and simulation performance, during the course of teaching, teachers can learn from the geometric optical design experiment platform designed by the University of Science and Technology of China. It is the first VR in China designed on the basis of VR technology. Teaching software. During the course of the experiment, there are many instruments that are more expensive, more complicated to operate, and easily damaged. If virtual intelligent instruments can be used instead, it not only saves the overall cost of operation, but also more convenient, but also facilitates students to operate clearly Show your ideas.

Using this design platform, students can adopt a three-dimensional expression method to express their creative ideas and operate in a virtual experimental environment.

With the continuous development of Internet technology, teachers can use VR technology to carry out distance education and form a distance education network system to better share teaching resources. This process can not only virtual experiment equipment but also virtual teaching teachers. For example, the distance education college of the Central Radio and Television University, with the joint efforts of teachers and students, has established an Internet-based game graphics engine. This graphics engine integrates all the actual functions of the general college, breaking through the limitations of VR technology and breaking the limitation of only browsing.

Therefore, if teachers can use the distance education system during the course development, they can find more teaching materials for students and provide more and richer teaching resources for teaching. Students can also learn selectively during the browsing process.

In the teaching process, in order to facilitate students' understanding, teachers can directly introduce some practical cases to carry out teaching. As early as 2015, Google has launched a virtual reality art exhibition, and then invited many artists to create virtual reality in the second year. Teachers can collect these materials directly to students, so that students have a deeper understanding of VR technology.

After that, teachers should lead students to understand VR technology. Taking indoor space design as an example, teachers can let students watch how to design indoor space in a virtual house, and how to adjust the proportion and change the size. In this process, teachers can encourage students to use the three-dimensional model design program on the basis of their own creativity to carry out design work.

As far as the current curriculum is concerned, the problem of homogenization is very serious. This is because some schools put the application of art and technology in the same position, and did not improve on the current curriculum. In the course of course development, the cultivation of students' practical ability is neglected, resulting in students taking a long time to adapt after entering the society.

Faced with this situation, it was necessary to readjust and build the curriculum system based on VR technology. This process should lead students to participate in practical projects of some enterprises, lead students to conduct field visits, and directly cooperate with enterprises to carry out project docking. This process also needs to use VR technology to carry out teaching interaction.

6. Conclusion

In the teaching process, teachers must take into account the current teaching form and teaching characteristics, on the basis of improving their professional skills, learn the application method of VR technology, and perfectly combine this technology with the curriculum. Teachers should recognize the advantages of VR technology, give full play to the advantages of this technology, make adjustments to teaching courses in this process, and build a more perfect course system.

References

- [1] Liu Tongxiu. Development and Application of Digital Media Technology--Application of Digital Media Technology in Radio and Television. *Western Radio and Television*, no. 21, pp. 197-198, 2018.
- [2] Ma Zhiming. Discussion on VR Technology Promoting the Development of Digital Media Teaching Mode. *Journal of Chifeng University*, vol. 34, no. 5, pp.143-144, 2018.
- [3] Jiang Yizhang, Wang Jun, Xie Zhenping, Deng Zhaohong. Thinking and application of intelligent technology in digital media teaching. *Journal of Wuxi Vocational and Technical College*, vol. 16, no. 1, pp. 20-23, 2017.
- [4] Zhou Shiming. Construction of digital media art professional courses based on VR technology. *Science and Technology*, no. 19, pp. 59, 2016.