

Research on the innovative application of VR technology in digital media education

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Abstract: At present, digital media education has become an important hot topic in college education. Based on the particularity of digital media, in digital media education, VR technology, as an advanced digital media technology, is favored by teachers and students of digital media majors. By simulating real scenes, VR technology can provide students with immersive learning experience and help students better understand abstract concepts and complex knowledge in digital media education. Based on this, this paper starts from the value of innovative application of VR technology in digital media education, analyzes the application status of VR technology in digital media education, and puts forward corresponding optimization strategies.

Key words: VR technology; Digital media education; Applied research

VR technology is a virtual reality technology that allows users to immerse themselves in a computer-generated simulation environment and feel an immersive experience. In the field of digital media education, the application of VR technology is gradually showing its innovation and development potential. By creating an immersive learning environment and personalized learning experience, VR technology can improve students' learning motivation and teaching effect, and promote the reform and development of digital media education. However, at present, in the actual education and teaching activities, there are still some problems such as application methods, teaching facilities, teachers' application ability, etc., which need to be solved, so as to better realize the innovative application of VR technology in digital media education.

I. The value of innovative application of VR technology in digital media education

1. Stimulating students' interest and enthusiasm in learning

In digital media education, the introduction of VR technology can provide students with a new learning experience, make them more active and actively participate in the learning process, and stimulate students' interest and enthusiasm in digital media learning. On the one hand, VR technology can create an immersive learning environment to help students truly feel what they have learned. While traditional teaching methods may only be displayed through text, pictures or videos, VR technology can simulate real scenes and make students feel as if they are in them. On the other hand, VR technology can provide interactive learning methods that make students more active and involved. While traditional classroom teaching is often one-way knowledge transfer by teachers, VR technology can provide an interactive way of learning. Students can operate, practice and interact with the virtual environment by manipulating VR devices.

2. Enhance students' information-based teaching experience

Digital media is a professional subject closely related to computer technology and media technology. The application of VR video or the provision of VR glasses in teaching activities will help enhance students' information-based teaching experience. Through VR video, a simulated virtual environment is built, and students can get a strong interactive teaching experience in the virtual environment, and quickly enter the corresponding teaching situation. At this time, the teacher then matches the appropriate explanation, so that the students can better understand and remember the knowledge points. At the same time, VR technology can also carry out personalized situation development according to students' experience and needs. By analyzing students' behaviors and reactions during the practical experience, the system can automatically adjust the learning content and difficulty to improve students' learning effect and teaching experience.

3. Promoting the innovative development of digital media education

Digital media education is a field of constant change and progress, and the application of VR technology can stimulate the awareness and motivation of innovation in universities and majors. By combining with VR technology, digital media education can develop more novel educational tools and teaching resources to provide students with richer and more inspiring learning content. In addition, with the advancement of science and technology and the development of society, new technologies and application scenarios are constantly emerging in the digital media industry. By introducing VR technology, teachers can keep up with the development trend of the digital media industry, provide teaching content and teaching models that are in line with the actual working environment, and cultivate innovative applied talents who are more in line with the needs of the digital media industry.

II. The application status of VR technology in digital media education

1. The application of VR technology is relatively simple

The development of VR technology in the field of education is still in a relatively preliminary stage, therefore, the current application of VR technology in digital media education and teaching services need to be improved. The application of VR technology in digital media education mainly focuses on scene simulation. By setting up virtual scenes, students can personally experience learning and practice in the real environment. However, this application mode is relatively simple, mostly static display of scenes, and lacks the function of interacting

with students, which leads to the failure to truly stimulate students' learning interest and motivation.

2. VR technology teaching facilities still need to be improved

In the current digital media education, VR technology teaching facilities still have some shortcomings, which need to be further perfected and improved. In order to realize the innovative application of VR technology in digital media education, it is necessary to be equipped with high-performance computer equipment, VR helmets, joysticks and other hardware equipment support. However, due to the high cost of these devices, many universities are unable to meet the demand of teaching facilities for VR technology applications. At the same time, the application of VR technology cannot be separated from the corresponding teaching software platform. However, there are relatively few VR teaching software on the market at present, and the quality is uneven. The lack of teaching software not only affects the learning effect of students, but also limits the application of VR technology by teachers. In addition, the application of VR technology also needs a good teaching environment, including classroom space layout, equipment placement, light and other aspects. At present, the environment layout of many university teaching facilities does not fully take into account the special requirements of VR technology application, resulting in students may be subjected to external interference when using VR equipment, which will affect the learning effect.

3. Teachers' VR technical literacy needs to be improved

Although VR technology has broad application prospects in digital media education, teachers still have great room for improvement in the operation and teaching design of VR technology. At present, many teachers lack a deep understanding of VR technology and the ability to operate it proficiently. This is due to the relatively novel and rapidly evolving nature of VR technology. Compared with traditional teaching methods, VR technology requires teachers to have certain technical literacy and operational skills, be able to skillfully use VR equipment and software, and deal with possible technical problems in the teaching process. In addition, the application of VR technology in digital media education is not only the simple use of VR equipment to display virtual scenes, but also requires teachers to reasonably combine VR technology with course content to design creative and educational virtual scenes. This requires teachers to have a deep understanding of subject knowledge and teaching objectives, organically combine virtual reality technology with course content, and enhance students' learning experience and teaching effect.

III. The innovative application strategy of VR technology in digital media education

1. Applying VR technology to innovate diversified digital media teaching methods

In the new era, VR technology provides new possibilities and opportunities for digital media education. The application of VR technology and the innovation of diversified digital media teaching methods can effectively improve students' learning effect and teaching experience. Traditional teaching methods are often monotonous and boring, and it is difficult to attract students' active participation. However, VR technology can simulate real scenes and place students in a virtual environment, making the teaching content more vivid and interesting. For example, when learning more abstract theoretical knowledge, students can participate in the reproduction of virtual scenes through VR technology, and deeply understand the background and application significance of theoretical knowledge, so as to stimulate their interest in learning. Secondly, innovative digital media teaching methods can enhance students' teaching experience. Through VR technology, students can experience the teaching content in an immersive way and improve their understanding and memory of knowledge. For example, in digital media art education, students can experience the creation process of artistic works through VR technology, so as to better understand the artist's creative intentions and techniques. Such teaching methods can make students more actively participate in learning and improve the effect of learning. Finally, innovative and diversified digital media teaching methods can also promote the development of digital media education. VR technology offers new possibilities for the reform and innovation of digital media education. By applying virtual reality technology to teaching, teaching content can be effectively enriched, teaching quality can be improved, and digital media education can be promoted to a more efficient and interesting direction. At the same time, through the innovation of digital media teaching methods, it can promote the professional development of teachers, improve teachers' teaching ability and innovation awareness.

2. Build a practical teaching platform for digital media based on VR technology

The construction of digital media practice teaching platform is one of the important strategies for the innovative application of VR technology in digital media education. A scientific and systematic digital media practical teaching platform can provide students with abundant learning resources and practical opportunities to help them better understand and apply digital media knowledge. On the one hand, digital media practice teaching platform can provide students with real virtual environment and practice scenes. Through the use of VR technology, students can participate in the virtual world immersive, personally feel and participate in the practical process of various digital media production. Such practice scenes can better stimulate students' learning initiative and guide them to establish a good knowledge system of digital media. On the other hand, students can create their own digital media works through the tools and software on the digital media practice teaching platform. They can carry out virtual experiments, design virtual scenes, make virtual exhibitions and so on, thus deepening their understanding and application ability of digital media technology and software. In addition, the digital media practice teaching platform can also provide rich case studies and teaching resources. By studying the cases on the platform, students can understand and imitate excellent digital media works, so as to improve their creative level. At the same time, teaching resources on the platform can also provide students with comprehensive learning materials and guidance, so that they can better grasp and apply relevant knowledge and skills in practice. It should be noted that in the process of building the digital media practice teaching platform, universities and teachers need to take into account the platform's technical support and equipment investment. The development of VR technology requires the support of a

large number of hardware equipment and software systems. Therefore, sufficient manpower and material resources need to be invested in the construction of the platform to ensure the normal operation of the platform and a good experience for students.

3. Strengthen the training of VR technology and improve the teaching ability of teachers

With the widespread application of VR technology in digital media education, it is particularly important to improve teachers' application ability of VR technology. Only when teachers have enough application ability of VR technology, can they make better use of VR technology to provide rich teaching resources, so as to improve the teaching quality of digital media education. First of all, colleges and universities should carry out corresponding training courses, including the principle and operation of VR technology, VR teaching design and implementation. During the training, some experts in VR technology can be invited to share their experience and latest research results. In addition, teachers can be organized to visit VR application cases to learn about VR technology application practices in various teaching scenarios and stimulate their learning interest and innovative thinking. Secondly, colleges and universities should encourage teachers to participate in practical research and teaching innovation activities of VR technology application. For example, teachers can be organized to participate in the compilation and sharing of school-based textbooks and teaching cases on the application of VR technology, and encouraged to apply VR technology to their own classroom teaching, and conduct case summary and reflection. Or organize some VR technology application teaching competitions to stimulate teachers' innovative thinking and improve their VR technology application ability. Finally, colleges and universities can also introduce some VR technology application professional certification mechanism to encourage and motivate teachers to improve their VR technology application ability. By participating in relevant certification examinations, teachers can obtain corresponding professional certificates and titles, which can improve their professionalism and competitiveness in VR technology application. This certification mechanism can help colleges and universities effectively evaluate teachers' VR technology application ability, promote teachers' learning and progress, and then bring more innovation and change to VR technology application in digital media education.

IV. Conclusion

To sum up, VR technology, as an innovative educational teaching tool, can promote the innovation and development of digital media education. Therefore, universities and teachers should actively learn advanced teaching concepts and integrate VR technology into digital media teaching activities, so as to improve the teaching quality of digital media education and students' learning effect. Teachers can provide students with better learning environment and teaching resources by innovating diversified digital media teaching methods, building digital media practice teaching platforms, and improving the teaching ability of teachers, so as to cultivate more excellent digital media professionals.

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