

Research on Virtual Reality Technology in Promoting Situational Classroom Teaching in Higher Vocational Colleges

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Abstract

With the development of information technology, virtual reality technology is constantly applied and promoted. Virtual reality technology is applied in the situational teaching of the classroom in higher vocational colleges. Through the immersive experience of virtual reality technology, students can better understand the classroom knowledge and enhance the attractiveness of classroom teaching. At the same time, using virtual reality technology to carry out teaching activities can effectively solve the problems existing in traditional classroom teaching, and realize the innovation and optimization of teaching content. In addition, virtual reality technology can also teach through live broadcast, recorded broadcast and other ways to improve teaching efficiency. In the future, virtual reality technology will become an important tool for higher education, which is undergoing unprecedented changes. This paper will combine with the actual situation of virtual reality entering the classroom at the current stage in higher vocational colleges, put forward the problems faced by virtual reality technology in situational teaching, and find the innovative way of virtual reality technology in promoting situational teaching in higher vocational colleges.

Keywords

Virtual Reality Technology; Higher Vocational Colleges; Classroom Teaching; Situational Teaching.

1. Introduction

The application of virtual reality technology has injected new vitality into the situational teaching in the classroom of higher vocational colleges. Through virtual reality technology, students can personally experience the knowledge in class and feel the fun of learning. At the same time, virtual reality technology can also help students develop creative thinking and practical ability, stimulate students' thirst for knowledge and spirit of exploration. For the teachers of higher vocational colleges, how to use virtual technology to promote the reform of curriculum teaching is an important subject facing at present. The application of virtual technology cannot be divorced from the reality. According to the needs of teaching content, advanced teaching means should be used to let students learn in the virtual environment, so as to achieve the purpose of "teaching through lively activities". At the same time, vocational colleges should strengthen the research of virtual technology according to the characteristics of students, and constantly improve its application level.

1. The combination of virtual reality technology and classroom teaching in higher vocational colleges

Virtual reality technology is the system simulation of three-dimensional dynamic view and entity behavior in the virtual environment, using the virtual environment formed by the computer, the user is completely immersed in the scene. Virtual reality technology enables users to experience the feeling of being on the scene. A simulation scene is built by computer, and users are completely immersed in the environment through the system simulation of

interactive three-dimensional dynamic scenery and physical behavior integrated with a source information, which is a high-tech teaching experience method [1]. At the same time, virtual reality technology has also been widely used in the education circle. Through the combination of traditional classroom education and teaching with virtual reality technology, vocational schools creatively launched the "virtual experiment teaching" classroom, completed the seamless connection between traditional teaching content and virtual reality technology, and realized the innovation in traditional teaching content, teaching methods, teaching means and other aspects. It has explored a new teaching way of "Internet +" ideological and political courses suitable for the characteristics of students in higher vocational colleges, and built a brand new "virtual campus" with virtual teaching as the carrier. This "virtual campus" can not only let students experience the immersive learning environment brought by virtual reality technology, but also realize the sharing of teaching resources and promote the sinking of high-quality education resources.

Virtual reality technology is highly interactive, immersive and interactive, enabling students to feel the charm of knowledge and improve their interest in learning [2]. At the same time, the innovation of classroom teaching mode can be realized through virtual reality technology, so that students can participate in learning activities more actively in class, stimulate students' learning interest, and cultivate students' active thinking consciousness. Virtual reality technology can also improve teaching efficiency, improve the ideological and political course teaching process, and promote teacher professional development. Virtual reality technology can continuously improve students' autonomous learning ability, cultivate students' innovation awareness and practical ability, and promote the improvement of students' comprehensive quality.

The traditional teaching methods of higher vocational colleges are outdated, the teaching content is single, lacks pertinence and effectiveness, the students lack interest in the course content, the learning effect is not good, and it is difficult to adapt to the needs of the current social development. Teachers integrate virtual reality technology into classroom teaching, using virtual real environment, multimedia teaching means, interactive communication platform, etc., to achieve the whole process of classroom teaching, all-round, three-dimensional, can attract students' attention, and constantly improve the teaching quality of higher vocational college classroom teaching.

Virtual reality technology can also make the education of classroom teaching knowledge more visible, interactive and interesting, so that students can experience the real history and experience the real life in the virtual reality environment, thus breaking through the previous restrictions on classroom teaching knowledge, so that they can experience the real history, humanities and art education content in the virtual environment, thus leading them to form the right To improve their patriotic quality and further strengthen their love for their hometown, society and school.

2. Problems Faced by Virtual Reality Technology in Situational Teaching

(1) Information teaching is not perfect

At present, the information teaching of ideological and political courses in higher vocational colleges is basically taught in the form of multimedia screen. Students can only watch courseware through the computer screen, which not only wastes a lot of time, but also reduces students' interest in learning. When they see the content on the screen, they cannot see the actual situation in the classroom, let alone achieve real-time interaction [3]. This way of teaching not only wastes a lot of time, but also is not conducive to students' learning effect, which leads to a lot of students in class can not pay attention to the teacher, and some students even have conflicts with the teacher because of classroom discipline.

(2) The content of teaching design is not comprehensive enough

The application of virtual reality technology has brought a lot of convenience to the practice of classroom teaching in higher vocational colleges, but it has also brought great challenges to the teaching design of teachers. In order to consider which direction to develop, which aspect to develop and the degree of development, teachers need to make a comprehensive adjustment from teaching design to teaching methods, teaching effect and teaching process. Teachers' teaching design needs to be systematically studied in order to better guide the teaching practice of classroom teaching.

(3) Lack of professional talents

High-quality professional talent team is the core element to realize the combination of virtual reality technology and situational teaching model of vocational college classroom teaching, as well as the key link to the deep integration of virtual reality technology and situational teaching model of vocational college classroom teaching [4]. Therefore, in order to give full play to the education function of the classroom teaching in higher vocational colleges, we must strengthen the construction of the talent echelon of virtual reality technology, and constantly inject new vitality into the classroom teaching in higher vocational colleges. However, from the actual situation of the current development, the echelon construction of high-quality talents in higher vocational colleges cannot meet the reform needs of virtual reality classroom teaching. The number of scientific researchers engaged in virtual reality technology development and research is relatively small, the lack of corresponding talent training system, and most of them are beginners. Lack of systematic theoretical knowledge and rich practical experience, can not realize the real sense of "double teacher classroom".

3. Innovative Approaches of Virtual Reality Technology in Promoting Ideological and Political Situational Teaching of Vocational College Courses

(1) Perfect the teaching scene of virtual technology

In view of the current situation that higher vocational colleges use single multimedia equipment for teaching, higher vocational colleges should actively expand their ideas and constantly improve the application of virtual reality technology in teaching. By mobilizing various means such as vocal music, lighting and video equipment, higher vocational colleges should make full use of existing resources to develop virtual reality courses suitable for students' characteristics and constantly improve students' practical ability. For example, the forms of psychological drama, concert, film screening and other means enable students to better understand and grasp knowledge in class [5]. At the same time, we should strengthen the research of virtual reality technology, develop the teaching content and method suitable for the characteristics of higher vocational colleges, and constantly improve the teaching effect. In addition, students and teachers can play different roles respectively through the form of "moot court", and the notified cases will show the real plot. Students can watch the court live in class and feel the majesty of the law. The difficulty of situational teaching method in the classroom teaching of higher vocational colleges lies in how to combine the theoretical knowledge of the curriculum with the practical operation, especially the situation is a diversified way of expression. In the teaching process, teachers should pay attention to the individual characteristics of students, set situational courses according to different students' interests, personality characteristics and other factors, so that they can learn and explore in the situation and develop innovation in the situation. In virtual reality classroom teaching, teachers should make reasonable use of various teaching resources to create a classroom atmosphere conducive to the healthy growth of students, mobilize their interest in learning and initiative, so as to cultivate their interest in learning. In classroom teaching activities, some projects can be set up to make them actively

participate in the activities, feel the happiness of success, experience the joy of learning, and so on Nurture their creativity.

(2) Strengthen the integration of virtual reality technology and ideological and political education

In the situational ideological and political education activities, students can experience the heroic deeds of revolutionary martyrs, understand the glorious course of the Party and stimulate patriotic enthusiasm through vr technology. At the same time, students can better inherit the red gene, firm ideals and beliefs, whenever the exhibition of revolutionary martyrs, heroes and models in the memorial hall, students always can't help but respect, as if they have become those martyrs who died for the country. Through virtual reality technology, the combination of history and reality can be realized, the past and modern thinking, the ancients and the present face to face, through virtual reality situational teaching, students can truly feel the struggle of revolutionary martyrs, feel the touching and difficult years, students can better inherit the red culture through this situational learning. Understanding the heroic deeds of revolutionary martyrs enables students to remember history while receiving education, keep in mind their original aspiration, and reflect ideological and political education while moisten things silently.

(3) Improve the teaching methods of virtual classrooms

The situational teaching mode in higher vocational colleges should improve the teaching methods under the promotion of virtual technology, which can adopt virtual laboratory, virtual studio, virtual electronic whiteboard and other forms of teaching. The advantage of the virtual laboratory of ideological and political courses is that students can have a deeper exploration and more intuitive understanding of what they have learned. Moreover, they can carry out practice exercises in the virtual environment to restore the original story and help students better understand the content and value of historical events [6]. The advantage of using the virtual studio in class is that students can perform in the virtual world and interact with each other in the virtual world. Moreover, teachers should give progressive guidance based on the situational teaching characteristics of ideological and political courses, so that students can feel their own value in class and have a strong sense of achievement. At the same time, teachers should pay attention to the development of students' personality. In the teaching process, they should not only teach knowledge, but also impart ideas, emotions, attitudes, values and other aspects.

(4) To integrate new elements to enrich the teaching theory

Vocational college classroom teaching and virtual reality technology combined situational teaching, can try to constantly integrate new elements, teachers can combine traditional culture and virtual reality technology, through multimedia means to show the charm of Chinese excellent traditional culture, let students feel the extensive and profound Chinese culture. At the same time, through VR technology, students can have a more intuitive understanding of the historical origins of traditional Chinese culture, so as to stimulate students' interest in traditional culture. In addition, new technologies such as VR and AR can be used to enable students to learn more knowledge in the classroom. Teachers can also use vr teaching to let students experience the scenes of ancient imperial examinations and feel the elegance of ancient scholars through virtual reality technology, so as to cherish the present learning environment. The application of AR technology also makes it easier for students to understand knowledge points in class and improve learning efficiency. In addition, reality and virtual technology can also help teachers to carry out teaching design and realize personalized teaching.

4. Summary

The application and popularization of virtual reality technology has brought great changes to the situational teaching model of classroom in higher vocational colleges, and also provides a new way for higher vocational colleges to carry out online course teaching. Situational classroom teaching mode takes virtual reality technology as the carrier. Through the application of virtual reality technology, students can learn in a real environment, so as to achieve the purpose of cultivating students' comprehensive quality. This is the requirement of the development of modern educational technology, and also the only way for the future curriculum reform. Constantly improve the teaching effect.

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