

Virtual Reality-Based Teaching and Training Assessment Method and System Production Method

Pingxin Zhang, Hualiang Xiao, Zhen Ling

Sichuan Vocational College of Chemical Technology, Luzhou 646099, Sichuan, China.

Abstract: Virtual reality is a modern educational concept that contains more educational characteristics. In the process of making a teaching system based on virtual reality training and teaching assessment, there are many technical points, and we need professional guiding ideology. Teachers need to integrate virtual reality technology with actual teaching, create a virtual reality teaching system with high perceptual sensitivity, enrich students' learning experience with rich teaching modes, so that students can become different roles in the classroom, understand the evolution process of knowledge, and effectively enhance their personal learning effect.

Keywords: Virtual Reality; Teaching and Training; Assessment; System Production

Preface

Virtual reality, simply VR. In the development process of China in recent years, it has shown a certain application value in many fields. Since the 1990s, VR has gradually reached the state of comprehensive development, which has played a high enthusiasm impact on the social development and education development in China. Based on the analysis of the education field, the biggest application value of VR technology lies in providing students with diversified teaching scenarios, enriching students' learning experience, so that they can deepen their situation perception and understanding of knowledge under the effective interweaving of virtual and reality. Based on virtual reality, this paper deeply discusses the assessment method of teaching training and teaching system.

1. Design Principles of Teaching and Training and Examination System

Based on Virtual Reality

Teaching training and assessment is a very important teaching system in modern education work. The three-position integrated teaching system has a vital impact on the growth and development of contemporary students. Education is the fundamental attribute of the whole teaching system, but in addition, it also contains other attributes. Therefore, when building virtual reality teaching and training assessment methods and assessment system, teachers should follow the following principles.

Firstly, advanced nature principle. In a complete educational theory system, with the continuous development of education, learning theory also presents a great innovative development trend, gradually transforming from the previous behaviorism to the current constructivism, and even gradually transition to situational learning doctrine^[1]. The influence of these theories on learners varies in different periods. But there is no doubt that these theories are all indispensable elements in the development process of education. The main content of this paper is to build the teaching and training examination system with the help of virtual reality technology, to better provide educational assistance for students. The core of China's contemporary education work lies in innovation, so in the design of virtual teaching system, training system educators should also follow this principle, otherwise the design of the whole system will be meaningless.

Secondly, interaction principle. When carrying out education with the support of virtual reality technology, interaction is the biggest feature, but also the most valuable major advantage. For a relatively stable virtual reality teaching system, the interaction between man and machine is very important, which will directly determine the students' learning experience and the overall learning effect. When carrying out the system design work, the staff in related fields should consider the interface design of the account, ensure that it has high visualization, intuition, consistency and simplicity, fully meet the students' ability needs and psychological needs, and do a good job in the design of systematic interaction to improve students' learning experience.

2. The production idea of teaching and training and examination system based on virtual reality

In the process of education work and training and assessment work, the theoretical system that teachers need to follow gradually tends to be perfect for development. Such as cognitive learning theory, constructivism learning theory, situational theory, behaviorism theory and so on. The continuous and infinite impact of these theories on a certain degree of education in China, and also provide obvious development guidance for the teaching and training assessment methods and system production work under virtual reality.

Based on a behaviorist analysis, learning is a virtuous cycle between stimulus and response^[2]. In the process of making the teaching and training assessment system, teachers should take into account the changes of students' behavior, and also choose the appropriate degree of stimulation to stimulate students' good response, continuously promote the systematic teaching and program teaching, and maintain students' learning state.

Based on the perspective of cognitivism, when building the virtual reality teaching and training system, teachers should fully implement the people-oriented teaching standards, take into account students' external learning demands and internal learning demands, create appropriate teaching situations, form students through external stimulation, and drive students through internal formation. At the same time, in the process of building a teaching and training assessment system, teachers should also take into account the cognitive characteristics of students, try to enhance the interest and knowledge of the teaching plot, induce students to actively question, actively guess, actively explore, and then make them have a stronger learning initiative.

Based on the perspective of constructivism, in the teaching process, teachers should focus on stimulating students' independent thinking, cultivating students' social consciousness and situational experience. Therefore, from the perspective of constructivism, the design of virtual reality teaching and training assessment system should include four factors, namely, situation, collaboration, conversation and meaning construction. In the specific teaching process, teachers must create a teaching situation that can fit into the teaching content, and use this situation to guide students to conduct effective communication, and then show the construction significance of the overall classroom.

Based on the perspective of the situation, under the support of virtual reality technology, teachers should create the corresponding teaching scope according to the specific content of teaching. At the same time, through the real experimental environment and the virtual teaching environment formed by VR technology, the effective construction of the situation under the condition of the two can enrich students' learning experience.

In a word, based on the perspective of virtual reality, it has a high consistency with the various teaching theories mastered by teachers in the modern education work in China. More importantly, whether in the teaching, training or in the assessment, the teachers should emphasize the interaction of the participants, and deepen the students' immersive experience, so that they can successfully realize the knowledge construction.

3. Function content of teaching and training and examination system based on virtual reality

The first is the design of the virtual classroom. When designing a virtual classroom, teachers should give full play to

the application value of virtual reality technology, break the time and space limitations formed in the traditional teaching mode, so that students can be fully immersed in the virtual classroom, carry out learning activities freely, and create an efficient and relaxed education platform.

The second is the design of the virtual experiments. Based on the analysis of virtual reality, virtual experiment is a very important part of carrying out teaching activity training activities and assessment activities. Building a virtual laboratory will bring students more real experimental experience, and have a high sense of security, and can also effectively avoid the possible safety risks in various experiments, and prevent students from affecting their own personal safety due to improper operation^[3]. More importantly, building a virtual laboratory based on virtual reality is helpful to save the experimental cost, and can assist teachers to break through the limitations of experimental conditions and experimental space, so that students can complete the experimental projects anytime and anywhere with the assistance of the virtual reality platform, and improve their learning effect.

The third is the design of the skill function module. Based on the perspective of virtual reality function analysis, it has a high interactivity and immersion. With the support of technology, students can present a variety of different role identities, better deepen their mastery of the activity content, and their own skills training effect will be higher. Take automobile maintenance as an example. With the help of the virtual reality teaching and training system, students can repeatedly practice and continuously train for their own weaknesses until they really master skills and narrow the gap with other students.

The fourth is the design of virtual scenarios. Learning should be carried out in a real situation, so as to improve the students' learning effect. However, for many technical or more demanding teaching activities, it is relatively difficult to create a real teaching situation. Few schools are able to provide adequate situations for their students. The teacher can be based on virtual reality scenario design, maximize the authenticity of the teaching atmosphere, instead of book theoretical description or abstract expression, let students can more intuitive perception of teaching content, deepen the students' conception, improve the atmosphere of teaching and immersion, improve the effectiveness of teaching.

The fifth is the design of the virtual characters. Under the support of virtual reality technology, the students become the leading role in the classroom, the overall classroom participation improved, will fully participate in the whole learning process, through the virtual reality teaching test system, help the awakening of students' role consciousness, enable it to actively participate in learning tasks, become learning community and practice community. In addition, in the interweaving of virtual reality scenarios, students' learning experience will be more sincere, which can better communicate with virtual objects, form an emotional resonance breaking through time and space, and truly practice the teaching value of constructivism theory.

Conclusion

To sum up, with the support of VR technology, teachers can well change the teaching scene, enrich the role of students in the classroom, optimize the teaching atmosphere, and further provide sufficient impetus for students' learning, exploration and discovery. Although virtual reality technology is only a teaching tool with high accessibility, its impact on the development of education in China will not be ignored. It may promote China's education cause into a new life system, and will further promote the sustainable development of China's educational reform task. Educators in these related fields need to pay a high degree of attention to this technology.

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