Universe Scientific Publishing

Research on Visual Normal Teaching Training and Assessment Platform based on Virtual Reality Technology

Hualiang Xiao, Pingxin Zhang, Zhen Ling

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

Abstract: With the rapid development of information technology in China in recent years, virtual simulation teaching platform and other information teaching methods have been widely used in skill training, but there are few platforms for teaching and training of normal university students in the market.Although the current virtual simulation teaching platform can break the time and space restrictions, but it can not provide students with more real classroom teaching experience.Therefore, in practical education and teaching, 3 D modeling software is used to build virtual classrooms and virtual students to develop a highly similar virtual environment.In the virtual environment, it can provide students with an immersive teaching experience, so that students can feel the real classroom teaching environment, its flexible learning time, will effectively improve the teaching level and practical skills of normal university students.

Keywords: Virtual Reality Technology; Visualization; Normal Teaching and Training; Assessment Platform

Introduction

Virtual reality technology is a computer-generated virtual state that allows people to immerse themselves in it.Real-time communication and interaction with students through language and gestures, to create a multi-dimensional information space.In the process of using virtual reality technology, users can not only fully experience the real world situation, but also break the limitation of space and time to provide them with a personal experience that the real world can not bring.Therefore, this paper mainly analyzes the research of normal teaching training and assessment platform based on virtual reality technology, so as to provide certain reference and help for relevant teachers.

1. The concept of virtual teaching

Virtual teaching is a brand-new teaching mode that fully combines the traditional teaching concept and information technology on the basis of the modern talent training concept.People can enter a virtual space to teach and learn, which is a very novel mode.Virtual teaching mainly includes virtual teachers, virtual classroom and laboratory.People can conduct virtual discussion and research activities in the virtual space for effective learning.In a narrow sense, virtual teaching refers to the construction of a virtual learning environment for people by using virtual reality technology, in which people can re-show the objective facts.Through this realistic simulation way, to help students to master the knowledge points.In this form of teaching, it can effectively stimulate students' visual and auditory senses, and help students to acquire knowledge content.With the help of this realistic simulation effect, it can effectively stimulate students 'interest in learning and learning enthusiasm, guide students to actively participate in teaching activities, effectively stimulate students' innovation and imagination, and help students to expand their thinking.

1.1 Teacher virtualization

In the virtual reality system, the intelligent system can be carried out as a virtual classroom.This function itself has the ability to navigate and answer questions. In the process of learning in the students to obtain learning resources, to prevent excessive learning information leading to the students confused problems.

In the virtual teaching situation, teachers can fully combine network information teaching resources to help students

solve problems, and use network resources to integrate and modify teaching courseware and teaching programs.Therefore, through the use of virtual teaching methods, we can effectively carry out teaching in accordance with their aptitude, and improve the quality of teaching.

1.2 Student virtualization

In the virtual environment, there is no need to arrange classes according to their age and intelligence, but to fully combine the personal needs and requirements of students to learn.Students in the virtual environment are not just simple students, but through the virtual environment to obtain learning information and resources, enter this learning environment, through the double to participate in learning activities.

1.3 Virtualization of teaching resources

In the process of virtual situational teaching, teaching resources do not refer to teaching materials and teaching programs, but are a relatively special resource, including multimedia teaching courseware, virtual experiment and other contents.These teaching resources will be fully combined with intangible and tangible. Through the virtual teaching resources, they can effectively solve the problem of enrollment scale expansion, and will not be affected by the shortage of teaching equipment and teaching resources.

2. The visual normal teaching and training based on virtual reality technology

2.1 Adjust the structure of theoretical courses and practical courses

First of all, teachers should change their own teaching concepts in the actual teaching process, effectively adjust the ratio between professional courses and teaching skills courses, cultivate the skills of normal university students, strengthen the training of normal university students, and effectively improve students' practical consciousness.In addition, teachers should also change the methods and strategies of cultivating students' skills, and effectively improve the teaching effect by carrying out teaching situations.To effectively improve the teaching methods, fully combine theory with practice, improve the training effect, and maximize the effective training of normal university students.

In the process of training normal students, the classroom can establish a virtual environment highly similar to the real classroom environment, and make full use of three-dimensional diagram virtual reality technology and dynamic model technology.Lead the students into the virtual reality system to study together, to show the students some excellent teaching materials, and videos.Fully combine the needs of students themselves, effective learning.

2.2 Pay full attention to the cultivation of normal university students

In order to help normal students improve their teaching skills, teachers should first provide students with a variety of ways of exercise and practice opportunities.First of all, teachers should lead the students to carry out teaching simulation training together, and assign the students to each primary and secondary school for practice, so as to effectively improve the students' teaching awareness level.The second is to strengthen the micro-teaching training of the students, improve the students' teaching skills.Finally, the internship guarantee mechanism should be effectively improved to provide students with teaching and internship opportunities, and to effectively ensure the internship work through the construction of internship bases and internship time.

In the process of virtual teaching, teachers can guide students to fully compile the corresponding teaching plans combined with their personal needs, and save them after making the course PPT.Students can find their own teaching plan templates and teaching materials in the virtual classroom to effectively improve the quality of teaching plans.

After normal university students wear simulated reality glasses, they can enter the virtual classroom. The 3D model can provide students with intelligent response, which is consistent with the actual listening state.In the virtual classroom, teachers

can record the whole course through the system.After the end of the course, teachers can repeatedly watch their own effect in class, and constantly improve through the feedback brought by the system.

2.3 Cultivate students' basic qualities

In order to effectively cultivate students' teaching skills, it is necessary to establish a scientific and reasonable evaluation mechanism.Strictly follow the principles of objectivity, development and integrity, combined with the actual situation and teaching needs, to establish different reference values for students, to provide a better evaluation and feedback system.

The virtual system can fully combine the teaching plan and curriculum records to bring the final evaluation score.At the same time, it can also provide teachers with teaching evaluation and improvement methods, and provide more constructive opinions for teachers through multiple comparisons.

3. The advantages of virtual reality

3.1 Shorten the teaching time

Virtual reality is a very advanced science and technology, through the use of computer way to generate 3 D simulation environment.In the current education and teaching process, it is also a brand-new field and topic.Virtual reality technology can help normal university students improve their teaching efficiency.Let the students in the system really experience the teaching situation, to effectively improve their own teaching skills, exercise the students' teaching plan writing ability, shorten the time, improve the teaching effect.

3.2 Provide a sharing platform

With the help of virtual reality technology, it can help students to establish a shared virtual reality practice system, and shorten the relationship and distance between teachers and students.Break the limitation of time and space, so that students can better cooperate and communicate between teachers and students, realize resource sharing, meet students' professional development needs, and help students to build a knowledge system.

3.3 Improve students' teaching skills

By adopting the virtual reality system, we can carry out more targeted training and innovative teaching mode for normal university students, and improve their teaching skills.

3.4 Flexible learning time

By applying the virtual reality system to teach normal university students, students can fully choose the time and place of skill training based on their own conditions, break the limitations brought by time and space, and can effectively master the length of training time independently.

Conclusion

In a word, in the actual teaching process, using virtual reality technology to simulate the virtual classroom for students can effectively improve the teaching effect of normal university students and cultivate their skills.Break the traditional restrictions brought by time and space, effectively stimulate students' interest in learning, guide students and teachers and students, and improve the teaching effect.At the same time, it can also shorten the teaching time, increase the teaching materials, and effectively improve the teaching quality of teachers.

Project name: Research on visual normal teaching training and assessment platform based on virtual reality technology, project No.: SCVCVR2021.02VS

References

[1] Zhao, YM., Hao, JJ., Wang, HY., et al. Visual Analysis of the Evolution of Virtual Reality Technology Education [J]. Audio-visual Education Research, 2016,37 (12): 8.

[2] Liang, RN., Visual analysis of Virtual reality technology research in Domestic Education Field [J]. Journal of Langfang Normal University (Natural Science edition), 2018,018 (003): 29-35.

[3] Pan, DX., Fu, MH., Gan, JY., et al. Review of virtual reality technology education in China —— visual analysis based on knowledge graph [J]. Journal of Guangzhou Radio and Television University, 2022,22 (1): 7.

[4] Dai, J., et al. Exploration on the curriculum Reform of "Virtual Reality Technology" [C] / / 2009 International Forum on Vocational Education Development. 2009.

[5] Zhao, YM., Hao, JJ., Wang, HY., et al. Visual Analysis of the Evolution of Virtual Reality Technology Education [J]. Audio-visual education research, 2016,037 (012): 26-33.