

Exploration on Blending in VR Technology into Aerobics Teaching in Colleges and Universities

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Abstract. Aerobics is popular among teachers and students, from primary school to university. But at present most of the aerobics teaching mode is one of the traditional interpretation of the demonstration method, but a single, fixed teaching mode is difficult to meet the needs of modern teaching. The integration of VR technology to break the existing physical education curriculum teaching form, teaching material system and classroom teaching methods, so as to change the traditional calisthenics teaching and learning. It has important function and significance to promote aerobics teaching and reform.

1. Basic Connotation of Virtual Reality Technology

Virtual Reality, or VR for short. Advanced users to wear glasses, gloves and other equipment, using computer and external equipment simulation into a three-dimensional space environment and human feeling (sight, hearing, touch, etc.). The objects in the virtual environment building can along with the change of the position change, to create a virtual environment to deceive the effect of immersion, the brain as immersive. The application of virtual reality technology is very extensive, especially in the field of physical education, which can provide a lot of auxiliary functions for teachers' curriculum teaching, expand the breadth and depth of aerobics teaching, help stimulate students' independent learning desire, and promote students' learning interaction.

1.1 Main Features of Virtual Reality Technology.

The effects achieved by VR technology are completely controlled by all human feelings created by the computer system, and the immersion level can be indistinguishable between real and unreal. It integrates computer graphics technology, computer simulation technology, sensor technology, display technology and other science and technology. With perfect interaction with the environment ability, and help to inspire ideas.

Therefore, immersion-interactive-conception are the three basic characteristics of VR environment system. The core of virtual technology is modeling and simulation.

1.2 Advantages of Virtual Reality Technology in Aerobics Teaching.

VR technology using a variety of means, can the virtual reality environment, let everything can see, touch, listen to the "real", has a strong purpose, as well as higher interactive techniques make the perfect present, break in the process of aerobics learning multi-purpose voice, text, images, video and other 2 d data, slow, the parties, each point of teaching. The last is that it can efficiently stimulate students learning calisthenics in advantage.

2. Current development of Aerobics Courses In Colleges and Universities

2.1 The Present Situation Of Aerobics Courses In Colleges and Universities.

Some research shows that some universities that offer aerobics courses adopt unified teaching materials, including compilation of teaching materials or lecture materials; Some universities don't have textbooks, just audio and video information and action pictures. In addition to the use of teaching materials, but also in the use of multimedia teaching form. Most colleges and universities do not have complete hardware equipment and site security is not conducive to the development of aerobics courses.

2.2 The Shortcomings of Traditional Teaching Model.

The teacher is always in a dominant position for a long time. In the teaching process students rote learning, the teaching mode of too many machines, boring, repetitive, students are learning after an action needs to be stopped to look at the teacher's demonstration action, the continuity of the action has bad effect on the students. And students each semester to learn only a few fixed set of aerobics. Without intuitive video teaching lack of advancement, fashion and forward-looking.

2.3 Students Are not Very Interested In Learning.

Learning interest mainly depends on the characteristics of learning content, students' happy emotional experience of learning and students' existing knowledge and experience. Compared with traditional teaching, the introduction of VR technology from the previous multimedia assisted teaching has made breakthroughs in the above three aspects. The introduction of new technologies can give students a new experience and increase their interest in learning.

2.4 Low Teaching Efficiency.

In traditional teaching, teachers usually demonstrate actions, and students observe and imitate exercises first, which occupies more class time and reduces the utilization rate of class time. If modern technology is introduced into classroom teaching, the efficiency of classroom teaching can be greatly improved. Teachers make courseware in advance to play the route and direction of movements on the big screen to show the teaching content, which is convenient and fast. After students learn how to use VR to record their own movements and let students watch their own movements and deficiencies, which is the most vivid and intuitive way.

2.5 Poor Teaching Effect.

It has been reported that people can remember 10 percent of what they read, 20 percent of what they hear, 30 percent of what they see, and 70 percent of what they hear. That is, the learning effect produced by multiple sensory stimuli is superior to the teaching effect produced by single sensory stimuli. Therefore, teachers should try their best to stimulate students' different senses to participate in learning, so as to achieve better learning results. Therefore, traditional teaching methods cannot achieve better teaching results.

3. Advantages of Introducing VR Teaching Courseware into Online Aerobics Course Making in Colleges and Universities

The construction of online aerobics courses and the implementation of specific teaching activities in colleges and universities need to rely on high-quality online teaching platform. Online courses enable teachers to better stimulate students' interest and enthusiasm for aerobics courses. Through the study of the specific content of network course, we will focus on developing techniques, and let the students can be more observation technique, but with the technology will be dynamic, make sure to upload the video already have the action of the overall video, also want to have action change routes and formation of image, text, etc., may, when necessary, through the online communication module real-time guidance to students. To ensure that the content of online courses is fashionable and novel, to achieve an effective complement to traditional teaching content. If VR technology is introduced into online courses, students' interest will be even stronger.

3.1 Making High-Level Courseware.

In addition to the integration of some words and sounds, the courseware also requires the demonstration of athletes' movements. The perception system is used to digitize all kinds of required movements and establish models, so that a learning movement can be truly displayed. For example, the basic movements of the aerobics competition video are anatomized, and the technical movements are too fast and slow, etc. The teacher can clearly explain the basic movements, so that the students know more about what to learn, how to learn and how to practice.

3.2 Multiplicity of VR.

VR can flexibly integrate 2d and 3d graphics with audio music and other effects, so as to meet students' practical needs for independent learning and exploration of aerobics, and provide students with abundant independent learning resources. Virtual reality technology is helpful for teachers to control the teaching progress in calisthenics technology teaching. It is helpful for students to repeat

learning, change angles, receive language tips, and even give Suggestions and correct mistakes in the process of imitation.

3.3 The advancement of Virtual Technology in Aerobics Teaching.

Compared with the traditional calisthenics teaching in aerobics teaching into the VR can not only create a virtual teaching environment, also can create a virtual teaching activities, can be dynamic and interesting teaching content is blended in among them, make the student real experience in teaching aerobics technical movement, also can undertake teaching process monitoring, feedback learning and practice situation, slowly put review technical action decomposition and explain action video recording, the plait technique, improve technology.

3.4 High Efficiency of Students' Interest.

VR can change traditional calisthenics teaching methods and add modern technical teaching content, so that students can experience different calisthenics teaching curriculum mode. In teaching, teachers only need to set up the virtual environment and teaching movements in the computer control terminal, so that students can experience and feel the movements themselves, which can greatly improve the teaching efficiency, help students learn the movements, and stimulate students' interest in learning.

3.5 Flexible Arrangement of Homework.

The extracurricular study and training of calisthenics in colleges and universities plays an important role. For example, teachers can design some games or competitions related to aerobics, and let students act as competitors, performers, judges and other different roles, so that students can have a more comprehensive understanding of aerobics course content, and contribute to the continuous improvement of students' aerobics discipline quality. In addition, calisthenics is carried out in a collective form in many cases, so teachers should arrange more collective homework projects to encourage students to interact and communicate offline, so as to promote the common progress and improvement of students.

4 Conclusion

1 Integration of VR technology into calisthenics courses in colleges and universities is not only the practical need of calisthenics teaching reform, but also the objective requirement to meet the diversified learning needs of students. In the new era of chong xing, VR virtual reality technology has strong purpose, high interaction, and outstanding advantages of breaking through space and time restrictions. It provides a basis for educators to combine virtual reality technology with calisthenics teaching practice in the new era.

2 calisthenics courses in colleges and universities should be close to the practical needs of calisthenics teaching reform and talent cultivation in colleges and universities, carry out overall planning and systematic demonstration of each functional module, timely update the content of professional knowledge, strive to enrich the content and form of calisthenics teaching, and promote the effective development of calisthenics teaching in colleges and universities.

3 VR technology can make courseware, carry out training, practice training, network distance teaching and academic exchange of aerobics, etc. Virtual reality of environment can not only improve the perception ability of technical movements, but also promote the full display of expressive force of movements in training and teaching.

4 In the process of aerobics teaching, attention should be paid to improving students' ability to learn modern technology. Teachers should not only learn this technology, but also make reasonable use of the advantages of virtual reality technology.

In a word, there will be more and more products of virtual reality education in the future. This new medium of educational technology means is the future development trend of the whole educational technology development, and it will not only stop at the theoretical stage. Virtual reality education is not a dream, and the form of virtual reality plus physical education will certainly present a more splendid page.

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