The Application of Virtual Reality Technology in the New Liberal Arts Environment

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Abstract. Under the background of new liberal arts construction, how to carry out new ideas, combine new technologies and implement new models in college curriculum teaching is the key to promote the major reform smoothly. By sorting out the optimization idea of international economic and trade course "international settlement", combined with the application status of virtual reality technology in enterprise production practice, this paper discusses the integration idea of virtual reality technology and international settlement teaching, and analyzes some problems that should be paid attention to in the application process, which has practical significance for cultivating high-level composite liberal arts talents required by the new era [1].

Keywords: new liberal arts · Virtual reality technology · International settlement · teaching

1 Introduce

In April 2019, the Ministry of Education and 13 ministries and commissions held the launching ceremony of the "Six Excellence and One top-ranking" Project 2.0 in Tianjin, stressing that we should earnestly implement the General Secretary's Thought on Socialism with Chinese Characteristics for a New Era, earnestly implement the requirements of the Implementation Plan for Accelerating the Modernization of Education (2018–2022), and fully implement the "Six Excellence and one top-ranking" Plan 2.0. We will vigorously develop new engineering, new medicine, new agriculture, and new liberal arts, win the battle to fully revitalize undergraduate education, and point out the direction for high-quality higher education. The "newness" of the new liberal arts lies in "basing on the new era, facing the new changes, and promoting the new connotation", which requires the combination of modern information technology and subject courses, so that students can study comprehensively [2], so as to realize the expansion of knowledge and the cultivation of creative thinking. Virtual reality (VR) is a kind of virtual reality (VR) that puts the user in an artificial environment and changes the sense of motion, sight, hearing and touch with the experience created by display technology, tactile devices and exoskeletons. The emergence of virtual reality technology, as well as the closely related augmented reality technology, mixed reality technology and other new generation of information technology development, in the service industry, manufacturing industry

and other fields increasingly popular applications, especially in the visual, tactile, tactile, somatosensory and other aspects of development [3], make the application of virtual reality increasingly popular.

2 Optimization of International Settlement Courses Under the Background of New Liberal Arts

"International settlement" is an important course of international economy and trade specialty, which is highly practical and operable. In view of the new situation of the development of higher education in China and the new demand of humanistic education, there is room for further optimization of the current international settlement course system. This paper puts forward the following suggestions [4].

By introducing virtual reality technology into the trading environment of international trade and interactive design of the operation of international settlement, an intuitive and vivid virtual practical training scene can be created. Through this system, students can not only acquire professional theoretical knowledge, but also participate in the company's business negotiations and international settlement process, so as to improve their English communication level and achieve the purpose of practical teaching. English name VRML, that is, VRML, it is through the computer and virtual reality technology, to create a real, real, visual, auditory, tactile three-dimensional virtual scene, if you use VRML technology, with the help of the corresponding plug-in, you can use the mouse to "anatomy" and analyze the microscopic model [5].

Compared with MaterialsStudio, Diamond, Mercury, etc., the biggest advantage of 3D virtual technology is that it has strong interaction ability and can analyze microstructure arbitrarily. Of course, technical requirements will also restrict the popularity of this technology. The two carbon atoms in the ethane C2H6 rotate freely along the axis of symmetry, and when the C2H6 molecule rotates around the axis of C-Cσ, the C-H of the two adjacent carbon atoms meet into an Angle called a dihedral Angle. When a single bond rotates once, countless conformations can be formed. The structure with dihedral Angle 0 is called overlapping type (see Fig. 2b). In this case, the distance between the nuclei of two hydrogen atoms is the shortest, the repulsive force is the largest, and the system is the most unstable. The structure with a dihedral Angle of 60 degrees is known as the cross form (see Fig. 2c), and at this moment the two hydrogen atoms have the maximum nuclear distance, the minimum repulsive force, and the most stable system. If the structure model of C2H6 molecule is established with 3 dsmax, and the structure model of C2H6 molecule is set with the help of Cult3DPlayer, and the beginning and end of 3D animation are set in the slot of Cult3DPlayer, with the support of Cult3DPlayer, It can switch, rotate, flip, rotate, rotate, scale and other operations at any time, and it can insert and delete the position (or line) of each atom in the molecule when necessary. Good interaction is to observe the conformation of C2H6 molecule and judge whether each atom in the molecule is on a plane or a line. Provides a nice visualization of the 3D image.

At present, the assessment method of international clearing courses mainly consists of 30% to 60% (classroom performance, homework, training report), and 40% to 70% final examination. The "new" new liberal arts should also have new thinking in

curriculum evaluation. It should develop from the previous assessment mode based on theory examination to the direction of diversification. It should increase the assessment of process and enrich the assessment content of process [6].

The core technology of this module is Login detection, the code implementation is as follows: public String Login() throws Exception {

// The user name is incorrect.

if(userService.checkUserExist(user.getUsername() = = false).

return "noUser"; // The user password is incorrect.

if(userService.checkUsernameCorrect(user.getUsernameO), user.getPas sword()) = false).

return "wrongPassword"; // Log in as an administrator.

if(userService.getTypeByname(user.getUsername().equals("admin")).

return "admin";In the user management module, key use cases include adding new users, changing user permissions, changing passwords,

To change the user's basic information, the specific implementation code is as follows:

1. Code implementation of adding new users:

public String Add() throws Exception {

user.setType("user");

userService.addUser(user);

HttpServletRequest request = ServletActionContext.getRequest().

request.setAttribute("tipMessage", "Congratulations, adding successfully! Click OK to return.

Log back in ");

return "success";}

2. Code implementation of changing user permissions:

// Get the user entity.

public String editBr() {

if(Id = = 0).

br = null; else.

br = User.findBDByID(Id); return "success";}

// The permission is changed.

public String editAuthority0 throws Exception {

if(ar.getId() > 0){

String newFileNamel = "$" + ar.getStartimgname(); String newFileName2 = "$" + ar.getEndimgname(;

String realPath = ServletActionContext.getServletContext0.

.getRealPath("/upload"); if(! new File(realPath).exists()){

new File(realPath).mkdirs();At present, the assessment method of international clearing courses mainly consists of 30% to 60% (classroom performance, homework, training report), and 40% to 70% final examination. The "new" new liberal arts should also have new thinking in curriculum evaluation. It should develop from the previous assessment mode based on theory examination to the direction of diversification. It should increase the assessment of process and enrich the assessment content of process. As shown in Fig. 1:
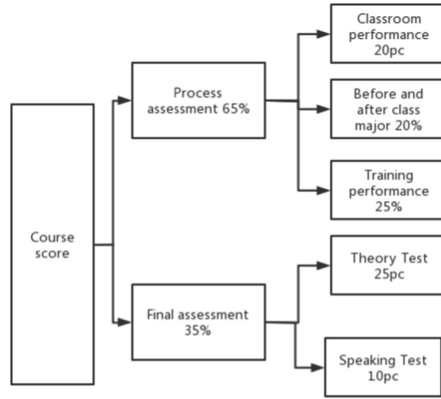
Fig. 1. Assessment chart of International Clearing course

3   Application Status of Virtual Reality Technology in the Industry

This paper learns from the literature database that in recent years, virtual reality technology has been applied more and more widely in all walks of life, and compares it with the development of existing industries, which will be of great help to discuss its application in practical teaching.

Virtual reality technology has had a huge impact on the micro-management and marketing practices of the service industry, and challenged the concept of physical tourism, and proposed a new way to allow customers to imagine their own bodies in different service places. E-commerce giants like Alibaba, Amazon and Walmart have paved the way for the virtual technology market by putting customers at the heart of the story, allowing customers to sample customers before the real experience, and using virtual reality technology and eye-tracking technology to provide shopping convenience for customers. With the rapid development of virtual reality technology, the consumption of virtual tourism products is more and more popular. These results show that applying virtual reality technology to actual production is a very promising method. If the virtual reality technology is applied to education and teaching, through the corresponding immersive training system to cultivate students' professional knowledge and skills, then its practical application value is obvious.At present, Chinese teaching reform has entered a new stage, many universities are trying to improve the quality of online education and use it as a new teaching means. Distance education, represented by MOOCs, has been developing for many years in China. Its advantages include: extensive knowledge, rich question pool, available time arrangement and open learning content to satisfy students' thirst for knowledge. However, in the statistics and questionnaire survey of students' learning situation, most of the students felt that the lack of classroom environment, unable to conduct immediate questions and answers and interaction; At the same time, because the knowledge is too scattered, the content is too much, it is difficult to form a complete knowledge structure. This lack of interaction in the teaching environment, not only can not improve students' learning enthusiasm, but also make students in the classroom can not carry out effective interaction and communication, thus affecting the learning effect
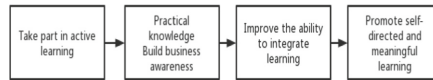
Fig. 2. The expected effect of virtual simulation technology applied in the practical teaching of "International Trade" course

of students. If virtual reality technology is adopted, a network-based virtual classroom and learning environment can be established in the distance education space, which can create a multi-level attractive simulation classroom and three-dimensional classroom.

Libraries, simulation LABS, etc., allow students to acquire more knowledge and learn more in a virtual environment. In each case, simulations of many interactive functions and applications (e.g., differences in billing methods) are provided, thus transforming students from passive receivers of knowledge into active learners and correctors.

4 Teaching Design of International Settlement Based on Virtual Reality Technology

Using computer to provide simulation environment for international settlement, using a variety of special equipment, let students "input" in it, to achieve direct interaction with the environment. Students can freely choose their own roles in the virtual environment, from different perspectives, the international settlement course in the abstract, complex and complex theoretical knowledge of in-depth research. For example, students can choose the role of export and export, communicate with local banks, choose different means of settlement and settlement, and personally experience how to deal with the relationship between settlement risk and financing in the actual trade environment. At the same time, I can also negotiate with importers to improve my English communication skills, deepen my understanding of various international conventions, trade terms, laws and regulations, and build the knowledge of international settlement from a global perspective.

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5 Conclusion

Virtual reality is a new type of information technology, which is increasingly connected and integrated with service industry and other fields. Under the background of the construction of new liberal arts, if virtual reality technology is applied to the professional courses of international economy and trade, it can greatly enhance the theoretical basis of students, enable them to better understand the real trade settlement environment, improve the teaching quality, enhance the professional ability, and thus form the major optimization, curriculum quality, model innovation. To achieve the goal of training high-level compound liberal arts talents required by the new era. But in the actual teaching, virtual

reality technology in teaching technology bottleneck, resource development, teaching content, promotion and many other problems are still very prominent. Therefore, in the initial stage of application, how to solve the current problems, make it better serve the teaching innovation, promote the combination of production, university and research, still need to be discussed in depth.

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