

Original Paper

VR Technology and International Business Negotiation

Teaching

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Abstract

With the continuous advancement of science and technology, technological products not only bring convenience to people's lives, but also bring great benefits to education. The emergence of VR technology is a major milestone in the history of human development. This article starts with the theoretical basis of Virtual Reality technology in teaching application, analyzes the characteristics of VR technology, summarizes the problems existing in negotiation teaching, and finally discusses the advantages of VR technology to the teaching of International Business Negotiation courses.

Keywords

virtual reality, International Business Negotiation, teaching

1. Introduction

With the rapid development of information technology, Virtual Reality (VR) emerged at the historic moment, and the application of virtual reality in the field of education has become more and more extensive. Virtual reality is an experience that uses computer technology to construct a three-dimensional scene and uses specific equipment to make users perceive and support interaction. It is a collection of simulation technology and computer graphics, man-machine interface technology, multimedia technology, sensor technology, network technology and other technologies (Fu, 2020). VR technology has the advantages of multiple perceptions, simulation interaction, absolute safety, autonomous openness, etc. It can adjust various perception functions such as vision, hearing, taste, smell, touch, etc., and use VR equipment to hold virtual objects and feel clearly the gravity and the grip strength. And different experiencers can communicate and interact naturally like in reality (Liu, 2016). In the wave of modern economic development, international trade is undoubtedly a powerful driving force for economic development. With the further expansion of opening to the outside world, there are more and more economic exchanges between domestic and foreign companies, and the role of business

negotiations is also growing. Not only is the development of international trade for companies dependent on international business Negotiations, the implementation of the strategy of “bringing in” and “going out” is also inseparable from international business negotiations. In an environment of increasingly fierce market competition, negotiation ability has become a necessary quality for entrepreneurs and managers. As an enhanced media for classroom teaching, VR technology provides an innovative technical direction and builds a three-dimensional, integrated and intelligent teaching environment for the teaching of international business negotiation.

2. Theoretical Basis

Constructivism is the theoretical basis for virtual reality technology to influence the teaching of international business negotiation. Constructivists derive theoretical nutrients from the philosophy of Kant, Marx, and Dewey, and Piaget, Vygotsky, Bruner’s psychological cognitive theories have also profoundly influenced and developed constructivist theories. The popularization of Internet applications and the development of computer multimedia technology have prepared the necessary hardware and software conditions for the practice of constructivist learning theory (Yang, 2011). Constructivism believes that the learning process mainly refers to the process in which learners build their own internal learning through mutual cooperation and active processing of information based on the existing knowledge, that is, the social and cultural background. Therefore, “situation”, “collaboration”, “conversation” and “meaning construction” are the four major elements in the learning environment. “Context”: The context in the learning environment must be conducive to the construction of the meaning of the content learned by the students. In a constructivist learning environment, instructional design must consider not only the analysis of teaching objectives, but also the creation of situations that are conducive to the construction of meaning for students. “Collaboration”: Collaboration occurs throughout the learning process. Collaboration plays an important role in the collection and analysis of learning materials, the formulation and verification of hypotheses, the evaluation of learning results, and the final construction of meaning. “Conversation”: Conversation is an indispensable part of the collaboration process. The collaborative learning process is also a conversation process, in this process, each learner’s wisdom are shared by the entire learning group, so conversation is one of the important means to achieve meaning construction. “Sense construction”: This is the ultimate goal of the entire learning process. To help students construct meaning in the learning process is to help students achieve a deeper understanding of the nature and laws of the things reflected in the current learning content and the internal connections between the things and other things. Constructivism emphasizes that the role of the learning environment must be conducive to the construction of the meaning of the content learned by students. Only when the learning process is combined with the real situation can meaningful knowledge construction take place. The immersive learning of virtual real scenes provided by VR provides a strong technical support for the theory of constructivist learning environment.

3. Characteristics of VR Technology

VR technology allows viewers to wear helmets or eye masks, and create a new virtual world by completely immersing in the rendered specific audio-visual space, allowing viewers to experience the fantasy wonders in a three-dimensional and holographic manner, and the viewers can observe in time and without restrictions things in three-dimensional space. Burdea and Coiffet (1994) proposed the three “T” characteristics of virtual simulation technology, namely Imagination, Interaction and Immersion allows learners to experience the “real” world in a virtual environment. With the rapid development of artificial intelligence technology, the VR system began to gradually develop in the direction of intelligence (Zhao, 2017). VR technology has the three characteristics of immersion, interaction, and imagination. Simulating environments that are not available in real experiments, or realizing difficult-to-complete teaching functions and training, it has a prominent position and broad prospects in the education field.

(1) Immersion

Immersion refers to the use of computer-generated three-dimensional images to place people in a virtual environment, just like in the real world, breaking through the boundaries of time and space, and deepening the understanding of knowledge in a subtle way. It is more intuitive, more three-dimensional and more stimulating than the simple flat preaching of education. At the same time, learners devote themselves to the feedback of various sensory and motor feelings such as sight, hearing and touch in the computer virtual scene to stimulate the correlation response of the nervous system, obtain sensory coordination effects, and improve learning efficiency.

(2) Interactivity

Learners control professional VR devices to interact and experience naturally with the virtual environment in instinctive ways such as gestures, movements, eye tracking, voice recognition, expression recognition, and brain waves. In this computer-generated virtual environment, participants can interact with sensing devices to simulate human senses of vision, hearing, touch, smell, etc.

(3) Imagination

Imaginative, virtual environment allows participants to immerse and acquire new knowledge, improve perceptual and rational understanding, so that participants can deepen concepts and germinate new associations, and inspire creative thinking. The system combines the status of the learner, interacts with the learner, and updates and chooses new ones in real time. VR technology integrating learning and creation, learners take into account the dual identities of learners and roles, and cultivate learners’ imagination and creativity, which not only enriches teaching methods and content, but also effectively improves learning efficiency. Its full immersion, interactivity, multi-sensory simulation and rich teaching content will become the development of the future classroom direction.

4. Problems Facing the Teaching of International Business Negotiation

Application skills, cross-cultural communication, business communication and negotiation strategies being its main content, International business negotiations are, in the final analysis, about practices. At present, under the development of economy and technology, modern education has made great progress, but there are still some drawbacks in the form of teaching.

(1) Monotonous and Boring Teaching Mode

The existing international business negotiation teaching mainly relies on the classroom teaching mode, and the classroom teaching mode has time, space and resource limitations. Although teachers use multimedia technology to present audio, video, image and other auxiliary teaching resources to students in class, it cannot reflect a dynamic process of learning, especially when it comes to theoretical knowledge such as negotiation concepts, negotiators, and negotiation principles.

(2) Poor Sense of Reality in the Course Teaching

In the traditional negotiation teaching model, the biggest dilemma is the lack of authenticity of the learning environment. The pre-negotiation preparations include personnel, information collection, material conditions and discussion of the negotiation plan, etc., used in different situations and stages during the negotiation process. Different strategies, as well as the values, consumption customs, lifestyles and cultural backgrounds of people from different countries, nationalities, and regions are extremely different, forming different negotiation styles. VR is a computer simulation system that can create and experience a virtual world. It uses a computer to generate a simulation environment to allow users to have an immersive experience.

(3) Teacher-centered Classroom Teaching

In traditional teaching, the teacher stipulates the content, structure, progress and methods of the class, and the students are completely passive in accepting the problems described by the teacher, which is not conducive to the idea of students' active learning, and hinders students' thinking ability in the classroom. It is high time that teachers needed to assume the guiding role of instructors and organizers of learning, assist in creating an independent and inquiring learning environment, and cultivate learners' advanced cross-cultural communication skills. Through monitoring and observation, referring to the different specific performances of learners in virtual listening and speaking communication, teachers conduct scientific analysis and evaluation of learners, and give feedback guidance to guide learners to process personal experience, thereby deepening the mastery of knowledge.

(4) Low Student Participation

Learners understand and master knowledge and rely on the combination of motivation, emotion and social experience. Only when these elements interact, the meaning construction of knowledge in the learner's mind can be completed. If they have a poor sense of presence, the courses will become more boring as the courses go deeper and students often show that they are not interested in learning those courses and their participation is not high. As a result, there are often situations where they lose confidence in their study and eventually give up.

5. Advantages of VR Technology in the Teaching of International Business Negotiation

Virtual reality technology integrates computer technology, multimedia technology, artificial intelligence, sensor technology and the Internet and other disciplines. It has aroused widespread interest with its gorgeous man-machine interface and immersive visual experience. Through the application of virtual technology in business negotiation, not only can the international business negotiation course become lively, but also improve students' enthusiasm for learning, cultivate students' active inquiry ability, improve teaching quality, and achieve the goals of teaching and talent training. For many years, we have been actively looking for classroom teaching methods that can stimulate students' initiative in learning, more intuitive, efficient, and integrated with theory and practice, which are embodied in the following four aspects:

(1) Fundamental Realization of Student-centered Teaching

The requirement of modern education is to overcome the shortcomings of traditional teaching. Students no longer blindly accept the dead knowledge told by teachers, but let students return to the dominant position of the classroom and use the teacher's guiding role in teaching, giving students the initiative to learn. In the classroom, teachers use VR technology to bring students into a virtual world, enabling students to be immersive and experience the scene described in the textbook. At this time, students have a strong sense of subjectivity, pro-activeness, concentration and patience, and can pay attention to the others' wording, expressions, changes in intonation, etc., discover the others' needs from the negotiation, understand the others' meaning and give timely feedback. While listening, they can also ask questions and make appropriate statements, with full self-confidence, clear purpose, rational expression, and effective control of the negotiation process. The ultimate goal of negotiations is to obtain the maximum benefit at the lowest cost. Therefore, price negotiation has become an important part of negotiation. Through price negotiation, the buyer can understand the essence, situation and sincerity of the seller's offer. Students can apply flexibly the negotiation knowledge they have learned to simulated negotiations, learn how to use skills to master the overall situation, learn to seek common ground while reserving differences and pursue long-term interests, as well as free and flexible skills and business etiquette such as dressing and appearance. The lifelike virtual environment can implement good human-computer communication. The organization of teaching content emphasizes the active participation of students and constructs a knowledge structure to enable students to actively participate in the teaching process. Such a change not only allows students to change from passively accepting knowledge to active accepting knowledge, but also improves their comprehensive literacy, learning motivation and problem-solving ability. Among them, the enhancement of the sense of presence has an impact on learning motivation. The promotion effect is the greatest, and the enhancement of interaction has the greatest effect on the improvement of students' problem-solving ability (Li, 2018). In the student-oriented personalized teaching, the requirements of teaching students in accordance with their aptitude, cooperative teaching mode and autonomous exploration in the environment can all be realized in the virtual world.

(2) Visualization of Abstract Knowledge

Through real-life demonstrations, the application of VR technology in the teaching process can make some abstract knowledge more vivid, so that students can more intuitively understand these abstract knowledge. Virtual reality technology makes teaching concepts more perceptual. With the development of educational technology, the content and amount of information displayed on multimedia are relatively large, and students' memory of words is also weaker than that of students' experience. Therefore, the use of VR technology can effectively overcome this problem. When negotiating with foreign companies, analysis of environmental factors is necessary, because these factors will affect the feasibility of the expected results. These factors include the country's political status, religious beliefs, legal system, social customs, financial and financial status, etc. There will be many abstract terms and knowledge points, which are difficult to understand. By imitating the actual negotiation situation, virtual reality turns abstract concepts into an experienced virtual environment, and promotes learners to form a cognitive structure. With real language and non-verbal context superior to multimedia technology, virtual reality creates good listening and speaking practice conditions for learners and helps to process information comprehensively. Virtual reality technology makes teaching resources more open and breaks through the limitations of time and space, including text and pictures multichannel and multilevel language input such as video, audio, three-dimensional interactive scenes, so that students can master the basic theories, principles and methods of negotiation in actual operation, and grasp the strategies and skills of business negotiation, and use them skillfully in simulated negotiation activities.

(3) Inspiration of Imagination

Virtual reality helps to inspire pioneering thinking in teaching and improve imagination. With the help of virtual reality technology, the interaction between the cognition subject and the cognition object can be realized through their mutual adaptability in an interactive way in the virtual environment so that students can get personal experience in learning. The real personal experience of students can not only improve students' comprehensive literacy, but also stimulate students' insights on negotiation etiquette and students' potential. Teachers can effectively construct a teaching environment according to the existence of problems, and guide students to explore the skills and precautions in the negotiation process, promoting teachers to discover new teaching modes in the teaching process. At the same time, In the teaching process, students can use VR technology to break the space limitations, show their creativity in a virtual environment, and in this process also make continuous modifications to it, so as to promote the development of their own thinking ability and improve their own Imagination ability, and then have a deeper understanding of teaching contents.

(4) Facilitation of Collaborative Teaching

Virtual reality facilitates the development of collaborative teaching. In traditional teaching, there are rare communication opportunities between teachers and students with teachers explaining relevant knowledge to students. Students lack time to explore knowledge and how to use knowledge in actual situations, and there is also a lack of cooperation among students, which can be realized through virtual

technology. Through VR technology, students can overcome the limitations of spatial location and distance between each other, and can put long-distance teachers and students in one environment together, promoting mutual exchange between students. Based on the questionnaire and self-learning platform implementation data, Zhao (2021) shows that junior students can effectively use course learning resources and actively participate in discussions and real-time interaction. In questioning, real-time interaction, discussion, homework submission and situational simulation, students' real-time interaction and situational simulation have good learning effects, which are helpful to the cultivation and improvement of independent learning ability. The high-simulation business negotiation scene created by virtual reality technology not only allows students to "rehearse" real negotiations, but also avoids the "face-to-face embarrassment". Moreover, they can also ask teachers or peers for help at any time, which can help relieve tension. Learners can gradually overcome knowledge difficulties and communication barriers, get rid of anxiety, and build confidence for a smooth transition to real communication. In the virtual environment of high simulation, learners can observe and experience knowledge to the maximum extent, form understandable input, and then personally participate, experience and interact to deepen their understanding of negotiation knowledge.

6. Conclusion

In summary, VR technology is an intensive medium for classroom teaching, which is conducive to stimulating students' interest in learning, forming independent learning, and enabling students to have a more thorough and clear understanding of the theoretical knowledge of business negotiations. The emergence of VR technology has not only enriched the teaching mode of international business negotiation courses, expanded the teaching content of negotiation, improved teaching methods, and improved students' enthusiasm for learning. At the same time, it has also promoted the development of modern teaching, and scientific teaching methods. As the most promising science and technology in the new century, virtual reality technology is an effective guarantee for achieving teaching goals and teaching tasks. The rational use of VR technology in teaching is the only way to adapt to the development of science and technology.

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