On the Application of Virtual Reality to Interpretation Learning

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In order to adapt to international communication and meet the higher requirement for interpreters, cultivating interpreters has been strengthened. However, due to the limitation of technology, the learning methods were more limited to the classroom, which leads students to a situation lacking enough opportunities to experience and practice interpretation. The technology of Virtual Reality (VR) is a rational combination between actual interpretation practice and simulative interpretation environment. Based on the working principle of VR technology, this paper attempts to apply VR technology to interpretation learning so as to achieve the goal that interpretation learners become high-level, applied, professional interpreters under the more flexible, creative, and effective learning model which can meet the need of improving international competitiveness, and also meet the needs of the national economy, culture, and social development.

Keywords: VR technology, interpretation learning

Introduction

With the modernization and the globalization of economy, politics, science, and culture, international communication is emerging in China, which leads to higher requirements for China's experienced translator and interpreter. Bachelor of Translation and Interpreting (BTI) are established in three universities to meet the requirement of economy-society market and be approved by the Ministry of Education in 2006.

The aim of BTI is to cultivate applied talents with solid linguistic foundation, extensive cultural knowledge and skills in oral and written translation. Although experts have been exploring a host of teaching models, some disjunctions are existing between students and qualified translators and interpreters, especially in interpreting. However, due to the limitation of technology and equipment, the interpretation learning is more limited to the traditional methods. In other words, students lack enough opportunities to experience real interpretation. That is to say, more discussions are needed in terms of interpretation learning.

Furthermore, traditional interpretation class is more like teacher-oriented passive learning. In that way, students cannot get enough inspirations and lack activity and creativity. Hence, students could not be fully exposed to the complexity and dynamics of interpreting. The deal-information ability and the strain capacity of students cannot be easily improved. So, effective teaching model for interpreting is urgently needed.

Therefore, this thesis is trying to apply advanced learning aid and specialized teaching model to interpretation, so as to enhance interpretation learners' practical ability.

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Theoretical Basis and Application

Theoretical Basis

Virtual Reality, referred to as VR technology, also known as an artificial environment. In essence, it is the use of a computer or other intelligent computing device to simulate a three-dimensional virtual world to provide users with visual, auditory, tactile, and other sensory simulation, allowing users to experience and interact in real time experience. Virtual Reality mainly includes simulation environment, perception, natural skills, and sensing devices.

It is a big leap in the development of educational technology that Virtual Reality technology is applied to learning. The environment of "autonomous learning" is a transition from the traditional "learning by teaching" approach to a new way of learning for learners to acquire knowledge and skills through the interaction between themselves and the information environment. Currently, many colleges and universities are actively studying the Virtual Reality technology and try to apply it to such areas like biology, chemistry, and aviation, and some of them have established a Virtual Reality and system simulation research room. Virtual learning can provide students with a vivid, realistic learning environment.

Application

China VR User Behavior Research Report shows that the VR box has become a mainstream VR device because of the relatively low cost, portable convenience. With its features of simple structure, low cost, and easy-to-carry, the VR box has overcome the shortcoming of multimedia teaching in the past with bulky equipment, high cost etc. With interactive teaching model, the application can achieve the purpose of improving students' practical ability of interpreting by adopting the hardware equipment like VR box, creating the corresponding teaching situation, combining with supporting teaching materials. As for the application of VR equipment, schools should firstly establish a platform and classrooms which can be used for VR teaching, and then purchase a batch of quality VR equipment. Students should prepare the corresponding mobile phones or pads to connect the VR box. Teaching contents need to be downloaded on the phone or pad in advance. During classes, students connect and wear their box to enter the teaching of interpretation in a virtual scene. They can experience different interpreting sites and different interpreter identities to conduct comprehensive and effective interpreting training.

It is necessary for learners to choose the teaching materials with the following characteristics: (1) timeliness: In addition to the regular content, textbooks should be focused more on reflection of the changing contemporary content that matches the latest information in various fields, which need interpreting activities; (2) authenticity: The audio or video supported by interpretation textbooks should reflect a real speech reproduction, and the impromptu characteristics of speaking. In the real situation, interpreters may encounter such situations as the noisy scene, the speaker with strong accent and unclear expressions. Textbooks should reflect authentic scenarios in interpreting practice. With textbooks, plus the VR box, the simulated interpreting scene is even more real; (3) pluralism: Interpretation ranks a wild range, such as diplomacy, courtroom, business, tourism, exhibition, medical, literature, etc. (Mu, 2011, p. 31). Selections should involve different areas, such as conference interpreting, which requires the strongest timeliness. It is necessary to update the textbook content now and then. The recent meeting will be reorganized into situational teaching content, and the practical teaching will be in progress, so that learners experience the atmosphere and pressure on the scene.
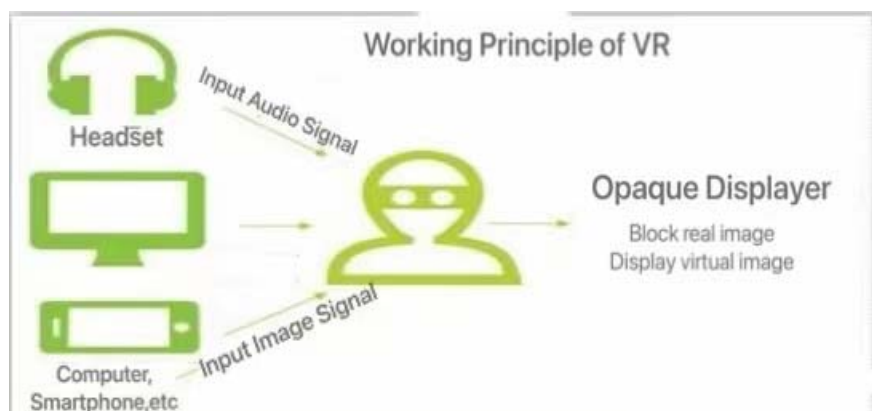
Figure 1. Working principle of VR.

Implementation Process

Before Interpretation: Be Well-Prepared and Raise Questions

Before entering into the formal interpretation practice, students must make full preparation, which includes downloading teaching materials, and consulting virtual situation. Then students should determine their own questions to be analysed and solved in the context. Here we can integrate another teaching model called PBL (Problem Based Learning) (Zhang, 2009, p. 81), which was put out by the United States Professor of Neurology Barrows McMaster University in 1969. It is a question-based and student-oriented teaching method. That is to say, to get into the situation, students must take the initiative to think and absorb knowledge. Being a proactive learner, which is more important, means students are required to raise their own questions throughout the process of self-directed learning and thinking.

During Interpretation: Independently Perform and Record Performance

Interpreting practice should be the most important part of the whole process. In this part, students' performance and reaction seem especially significant. According to the theoretical basis of interactive teaching, a teacher should not interfere too much, and allow students to fully present the interpreting process and the teacher should observe students' performance and record their problems as onlookers for later discussion. The forms of interpretation practice can be divided into group practice and personal practice. As for group practice, there is a designed virtual situation, such as conference interpreting. After learning about the simulated situation in advance, the study group should divide the work as soon as possible. Some of the members need access information through a large number of related conferences by mobile phone or pad, some of the members play the role of spokesperson in the conference, some of the members play the role of interpreter for on-site interpretation, and others are in charge of observing the interpreters' performance and providing feedback for the later discuss. To create the simulation-situation, using VR equipment to simulate the environment can enable students to experience the real on-site interpretation. Secondly, the vast majority of high-level interpreters grew up through a large number of interpretation practices. Interpreting does not only require efficient teamwork, but it is even more important for interpreters to train their professionalism. Although each student can get practice on their own VR equipment, teachers cannot guarantee that s/he could guide and pay attention to each student within such a limited class time. According to the survey conducted by the students from Guangdong University of Foreign Studies, one of the most unsatisfactory aspects of the

students includes the fact that teachers cannot often instruct students after class (Zhan, 2013, p. 41). In such condition, a database to record and keep students' performance seems very essential; each student should have their own database for the use of recording every training results. Database should be handed over by each student to manage. In this way, students can clearly understand their shortcomings and progressive space by analyzing each performance, and teachers can evaluate each student according to the database after class. The time limitation of interpreting is tight and the language conversion is fast. Students are required to be highly concentrated on individual training. With the existence of a database, teachers would not catch one and lose another in class and do not need to correct mistakes made by students during their interpreting so as to avoid affecting the training effect.

After Interpretation: Self-Examination and Evaluation

Evaluation is an important part of interpretation learning. Only by constantly profound introspection and revision can we make further progress. After finishing group learning, each group is required to make an overall conclusion concerning the whole process. The purpose of the presentation is not only to cultivate students' problem-solving abilities, but also to help students to improve ongoing reflection abilities. Just as "Guangwai" model (including three parts: skill decomposition, skill enhancement, and skill integration) indicates, what throughout the whole model is the teacher's scientific assessment of course content and student learning (Zhong & Zhan, 2016, p. 39). Similarly, when students present their results, teachers must handle the process and give guidance for each group, pay attention to inspire students to discuss, promptly keep the discussion from deviating from the theme, and also summarize the whole training and give effective feedback. After finishing personal practice, self-reflection is needed for each student. Students can reflect upon the problems encountered in interpretation by looking back to the audio or video recordings, take notes as reports, and store the reports on their mobile phone or pad for inclusion in their personal databases. Objective and comprehensive database is not only a way for teachers to obtain teaching feedback, but also a basis for students to adjust learning strategies and enhance learning abilities. In the final stage, teachers should evaluate each group and each individual appropriately, praise their merits, point out their shortcomings, make supplement about the questions that students did not think about, and further elaborate the key and difficult problems in interpretation, so as to improve teaching effectiveness.

Reflection

Ascendancy

Virtual Reality technology can create a realistic learning environment, and allow students to study through visual and auditory sensory stimulation. The application of VR technology to interpretation learning has the following advantages:

Firstly, through Virtual Reality technology, computers can produce a kind of artificial virtual interpreting scene, which enables students to produce the same feeling in practice and in the real interpreting scenarios, so that interpretation learning becomes vivid, and easy for students to understand and operate.

Secondly, the key and difficult problems in interpretation learning can be reflected through Virtual Reality technology. Learners can choose the best cognitive strategies based on individual characteristics, and quickly grasp the essence of knowledge. Such merit as autonomy of Virtual Reality is incomparable with other forms of media. Thirdly, interactivity is the most prominent feature of VR systems. Learners can observe or manipulate

objects in the virtual interpretation scene and get feedback through their own natural skills such as language and body movement, so as to increase their learning initiative and interest. The learning effect is incomparable with traditional interpretation learning.

Ultimately, through VR, learners can personally participate in the large-scale conference activities which they have not experienced before, feel the atmosphere, and experience the true pressure and feeling of the interpreters in the field. Such kind of virtual experience will not affect the effect of simultaneous interpretation on the spot due to students' mistakes, thus, avoiding the loss of the real task of interpretation. Precisely because of such safety, learners can train countless times by using virtual situations. Learners can gradually adapt to various complicated situations in real interpreting environments and improve their strain capacity. They accumulate sufficient experience in interpretation until they are fully qualified for real interpretation task.

Possible Challenges

Although Virtual Reality technology has strong technical potential and broad application prospects, there are some challenges and problems in the application of Virtual Reality technology in interpretation training.

Firstly, people have limited acceptance of VR teaching. Germination and rise of new things have always been accompanied by widespread doubts. Nowadays, as the emergence of VR teaching, its openness and immersion attract students, but at the same time, it can arouse people's distrust. People will doubt that something really can be learned in the Virtual Reality? Will students not be so addicted to entertainment such as VR game? The lack of enough understanding of the VR technology makes that VR teaching at this stage cannot dispel people's concern. This model will not be easily accepted by people, let alone popularity. Especially, for teachers and students who are most directly affected by Virtual Reality whether accept this model of education or not is also a problem. The most worrying questions are student engagement and whether teachers will get used to the technology.

Secondly, the development of VR technology is not enough. Any technology requires appropriate hardware as a carrier, which is a mere concept without hardware. VR teaching needs to be constructed based on the mature development of VR hardware. However, current VR technology is still in a state of continuous exploration. VR hardware is not perfect enough. Although domestic VR hardware technology has also achieved some innovation, most products' refresh rate is not enough, which will lead to discomfort when users use VR equipment; students wear for a long time which will produce a sense of dizziness. Problems like these have not been well resolved.

In addition, there are dozens of VR hardware products in the market; many of them have different levels of technology, so its major hardware cannot be compatible with each other. In terms of prices, which are most cared by people, except some brands take the cheaper route, most VR equipment prices are still high, which is not conducive to the promotion of a large-scale in school. Therefore, there is still a paradox in VR product price and function.

Thirdly, the scarcity of teaching content. The most important part of education is content and quality. Only by good content can it be accepted and respected by the public. VR teaching is still in the initial stage, content developers belong to the small group, and content is not abundant and mature enough to attract users. If students do not get the knowledge they need while using the product, they cannot experience the plentiful content, which makes that the VR teaching in China will not be recognized and developed. To establish a mature MTI interactive teaching model based on the VR technology, it is necessary for education sector and VR technology to make continuous innovation.

Conclusions

This paper starts with the VR technology which emerged in recent years and explores the feasibility of applying VR technology to interpretation learning. On the application of interpretation learning based on VR technology, learners play the central role and are provided with virtual interpreting situation. After highly targeted virtual training, students can gradually improve their interpreting skills and strain capacity, and ultimately the quality of interpretation learning can get improved.

Although at present, the application of VR technology to interpretation learning is not yet mature, the corresponding teaching model is not yet perfect, the introduction of VR technology into the classroom is necessary, it must be positioned. Only accurate positioning can make VR technology really play a role in the field of education. From the present state to a long period of time in the future, the application of VR technology is just like multimedia. We posit it as auxiliary teaching. VR technology is just means to achieve the purpose of our teaching, and is to strengthen the teaching effective and improve teaching efficiency. Of course, with the continuous improvement of VR technology, a curriculum based on VR as the main teaching method will appear, allowing students to understand and master various knowledge more quickly through safe and convenient methods and immersive learning.

Furthermore, with the continuous development of VR technology and the continuous maturation of interactive teaching model, an individual and collaborative studying environment and an innovative learning method will come into reality. With the rapid development of information dissemination technology, the existing education content and methods are being greatly challenged. Virtual Reality technology can vividly represent learning content, effectively create a learning environment, improve the efficiency of students in mastering knowledge and skills, optimize the learning process, improve the quality of learning, and mobilize the students' enthusiasm of learning.

As long as efforts are made to solve the technology and application issues of VR and to continuously transform the learning model, interpretation learners will inevitably become high-level, applied, professional interpreters under the more flexible, more creative, and more effective learning model who can adapt to global economic integration, meet the need of improving international competitiveness, and also meet the needs of the national economy, culture, and social development.

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