

English Multimedia Courseware Design based on Virtual Reality Technology

Xiaoping Yan^{1,a}

¹ Teaching And Research Institute Of Foreign Languages, Bohai University, Jinzhou, Liaoning, China

^a pingbox@126.com

Keywords: English Teaching, Multimedia Courseware, Design, Virtual Reality Technology.

Abstract. Modern teaching, the increasing use of modern teaching methods, especially multimedia plays an increasingly important role in teaching. Compared with the traditional English teaching methods, the advantages of multimedia is obvious. Correct and reasonable use of multimedia courseware, teaching English will play a more important role, and how to design multimedia courseware has also become the majority of English teachers should be explored. This article based on the English teaching, the important role of multimedia courseware and some teachers of multimedia courseware design problems to explore the using virtual reality technology for the English multimedia courseware design.

Introduction

Virtual Reality is known as artificial environment or immersive technologies. This technology is integrated in the application of computer technology to create an artificial virtual environment, can effectively simulate the perception of advanced human-computer interaction species acts in the natural environment vision, hearing, touch and so on. Virtual reality has three of the most prominent features: interactive, immersive and ideas of. Mainly used in e-commerce, online entertainment, remote education, business and other fields of data visualization [1]. The introduction of virtual reality technology in courseware production, can achieve courseware simulation capabilities can build a virtual space or virtual demo scene in kind, increasing vivid and interactive content.

The Advantages of Virtual Reality Technology in the Using of Courseware

Capable of three-dimensional presentations. Using virtual reality technology to produce courseware, courseware can be a full range of three-dimensional objects in the show, which is two-dimensional images and animations (such as rage flash) cannot be expressed [2]. Courseware objects involved in the release into the three-dimensional form, it is possible to show all aspects of the physical shape and internal structure, together with the interactive operation, function and use of operating presentation object, to show the properties of the object. Under some engineering, science, such as mechanical, electrical components in, due to the complexity of the object involved. The figure is made of a courseware author screenshot courseware describes the structure and process of coupler, which uses virtual reality technology, allowing users real-time observation from each angle coupler structure, work processes, and can be scaled to any mobile view. Use the courseware in teaching, increasing students' interest and improve learning outcomes [1, 2].

Lack of energy simulation experiments, to make teaching conditions. In practice, teaching, often because of laboratory equipment, laboratory space, funding and other aspects of teaching, so that some of the teaching experiment should not be opened. Using virtual reality technology to produce simulation-based courseware, can make up for deficiencies in these areas, students will be able to stay at home to do a variety of experiments, to obtain the same experience with the real experiment to enrich perceptions and deepen the teaching content understanding, reduce investment funds [3]. At the same time, also to avoid the real dangers arising from experiments or operation. In addition, due to the "Device" and "parts" mostly "virtual", according to the development needs re "Generate" device, so that the "equipment" and constantly updated course content in a virtual

environment, so that practical training to keep up with technological development, training highly qualified and skilled personnel to ensure technical and managerial personnel to meet the requirements of a knowledge-based economy.

Virtual teaching situations can. Virtual reality technology can easily construct a three-dimensional scene, in which people walk through the first perspective. That can generate interaction between the scene and the controller, coupled with the generation of high-quality picture and proximity to engender the feeling of their community. For example, you can create a virtual geography, space, virtual roaming courseware [4]. You can also virtual historical figures, great, celebrities, teachers, students, doctors, and other characters, the creation of humane learning environment in which students can learn in a natural and friendly atmosphere, exchange, discuss, discuss learning various issues, collaborative learning.

To achieve three-dimensional interactive dynamic performance. Interaction is always an important factor in obtaining good results of multimedia teaching. CAI courseware in general, we can achieve the interactive text, images or text links, keyboard interaction (such as a variety of interactive tools such author ware software provided), flash can also provide interactive two-dimensional basis [3], but on the basis of three-dimensional the interaction is difficult to achieve under normal circumstances, the introduction of virtual reality technology, to achieve three-dimensional interactive dynamic performance, will inevitably lead to a new round of visual impact, will greatly attract students enthusiasm and passion for learning.

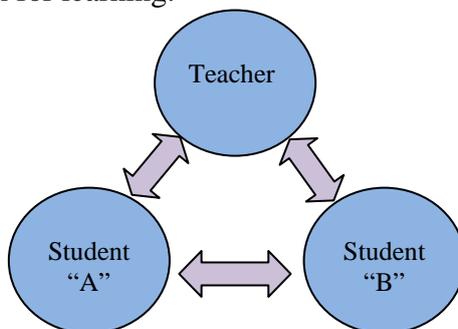


Fig.1 Interactive diagram among teacher and students in multimedia teaching

Virtual Reality Technology in Courseware

Now on the market to achieve virtual reality technology software has grown to dozens of different kinds, like cult3D, shockwave3D, Fluid3D, virtools more [2,5]. Which cult3D wider application, which allows ordinary users to see the past, only on high-end workstations to see detailed real-time rendering, even in normal use no hardware acceleration; cult3D efficient compression technology enables through cult3D software export three-dimensional image files are usually only 20-200K. cult3D has a good cross-platform performance, it supports a variety of mainstream browsers and all common operating systems.

Cult3D effect so good, but the production process is not complicated. Teachers can very easily develop interactive features cult3D object. 3D model used is from the current mainstream development tools introduced, such as: 3dsMax, Maya, etc. cult3D object using a binary read-only file in an encrypted format, so you can protect intellectual property rights [5]. cult3D objects can be embedded in Web pages, adding animation, sound, and can be embedded in applications cult3D procedure for advanced interaction and movement, which for interactive courseware network rolled out a new road. Because of its attractive place to another can be used as elements are inserted into the office and PDF documents, also supported under windows platform Director, Authorware and Real player, so teachers can insert an object in common cult3D courseware software.

The following describe the advantages of using virtual reality technology to produce multimedia courseware in detail.

More rational using of multimedia courseware and teaching English to highlight the "task-based" feature. In the design of multimedia courseware teacher, you should take into account the focus of teaching content, taking into account its leading role in the building under the guidance of

theory, dual master mode, the teachers take advantage of multimedia technology to create dynamic and vivid English courseware guide students to think, to lead the students into learning English [6]. Teachers should also encourage students to carry out a series of activities to practice the "listening, speaking, reading and writing," the comprehensive practice. It is necessary to set specific issues with the task of learning to enable students improving classroom teaching. Teachers can they know the multimedia material (Figure 2) based on the specific content of teaching, teaching content delivered in the form of video or animation.

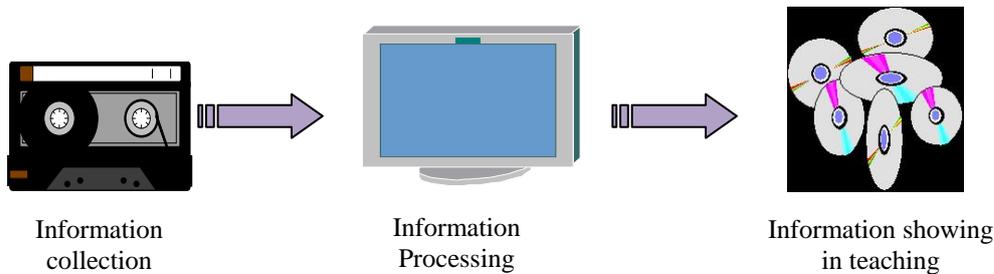
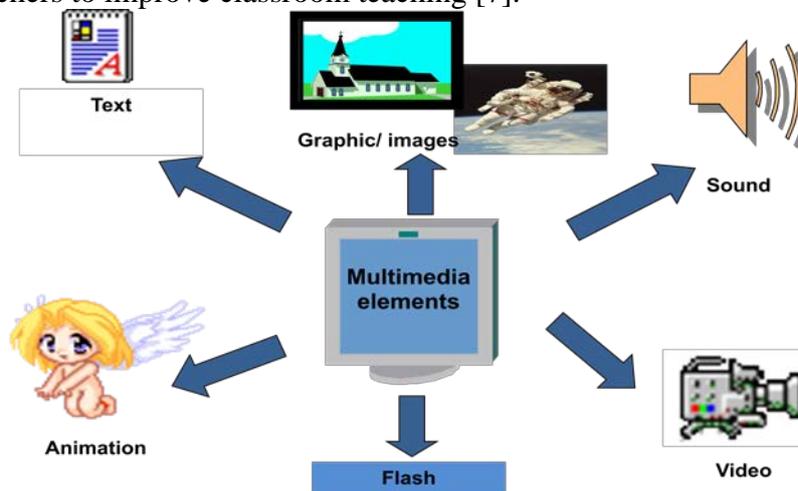


Fig. 2 Multimedia Achievement

More effectively improve the students to participate in classroom positive initiative. Actively creating a rich variety of real-life situation, the theory of teaching integrated into the teaching situation, the final task of language learning --- students' communication skills. Here, through multimedia technology, courseware integration of text, images, audio, video, Flash animation and other elements (Figure 3), so that a more realistic situation, cultivate students' interest in participating in the classroom to improve student's positive initiative. Also, leave enough space for the exchange between teachers and students, because students more information, thinking more active, more interaction with teachers to improve classroom teaching [7].



Fi. 3 Multimedia elements

Pay more attention to the center of the guiding status of English textbooks. Rational use of multimedia, science with vocal and other materials, the content of textbooks to be the center of the rational combination of fine materials and processing information, highlighting the materials, do not deviate from the teaching objectives and teaching evaluation [5]. In dealing with textbook information presented will be heavy and difficult to highlight, fine materials, as reflected in policy thinking on multimedia courseware to learn choreography. Combined with students working memory capacity, the amount of attention to students' cognitive load, reduce the additional involvement of information, with the focus on the content of heavy and difficult to draw the line, or the use of multimedia sound capabilities to focus on the size of the boot, but these are based on the basis of English teaching is based on the guiding role to ensure that the multimedia courseware materials.

Summary

With the rapid advent of the information age, it can be said virtual reality technology is a dynamic technology has great potential in the field of application of the future of education in English. However, there are still many unsolved theoretical problems and technical hurdles yet to overcome. And is currently still in use, and other major e-commerce, gaming and entertainment, how as soon as a new technology is introduced to modern teaching courseware, and expand its application, there are a lot of work to do. Of course, the technical requirements of virtual reality itself, with related design personnel, designers and other three-dimensional design qualities of these problems are troubled by this new technology in the courseware, which require us to learn, to think.

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