A Study on the Trend of Integration of VR and Education Publishing

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ABSTRACT

Since the first time the term “Virtual Reality” (VR) has been used back in the 60s, VR has evolved in different manners becoming more and more similar to the real world. The VR technology provides a new experience in the education publishing industry, such as immersion, interactive, hyperspace, sensory. The integration of VR and education publishing has an unmatched advantage in traditional publishing industry. With the progress of the VR technology, the demand for VR content is overwhelming. The VR can meet the demand of the education market for the change of learning styles. Therefore, the integration of VR and publishing industry may be a new exploration of the digitization of copyright resources in the publishing industry.¹

INTRODUCTION

VR (Virtual Reality) is a computer technology that can create and experience virtual worlds. Using computer information technology to simulate the creation of a three dimensional virtual world. With special wearable devices, users experience visual and visual touch in the virtual world. Through human interaction, experience the feeling of being in the real environment. The VR, which began to move into the mainstream consumer market in 2014, has a sense of immersion, richness and richness. The VR technology provides a new experience in the publishing industry, such as immersion, interactive, hyperspace, sensory and landscape. Therefore, the integration and development of the VR and publishing industry may be a new exploration of the digitization of copyright resources in the publishing industry.

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Educational publishing is the foundation of the publishing industry, and the fields of educational publishing with strong control are all exploring the digital transformation. Take digital education as an important opportunity of industry transformation. Therefore, the transformation path of VR digital education and publishing is worth paying attention to and deeply researched.

THE ADVANTAGES OF INTEGRATION

Thomas Furness, the father of the VR, said the VR changes society, starting with education! In contrast to computers, the VR promotes the flat virtual world to a three-dimensional virtual world, the interaction mode is more anthropomorphic and natural, posing new challenges to traditional learning methods and promoting the five major changes in learning styles.

Immersion

In practice teaching, it is often restricted by teaching conditions. Such as limited practical space, expensive equipment, large consumption of practical materials, etc. By using the VR technology, virtual instrument equipment, virtual laboratory and virtual practice base can be established on computer. Create an environment that is close to the actual skills simulation training, it is also possible to optimize the practice teaching environment on the computer. Therefore, the application of VR technology to create an analog environment on computers can solve problems such as the practice of site limitation and equipment loss. It can carry on the practice teaching with complicated operation, high cost and long cycle, increase the opportunity of practice teaching and improve the efficiency of practice teaching.

Simplicity

VR cannot only reproduce the real scene, but also have a strong vigilance. It can create a personalized learning environment. Vivid situations stimulate students' interest in participation, Interactive learning in the VR can achieve a similar level of fun and challenges in online games.

Hyperspace

The application of VR technology can break through the space and time limit of practical teaching. Implementation of repeated, non-dangerous situation-style practical teaching. You can provide specific objects and events at any time or place. Such as the past, present, future, micro, macro, fantasy and other worlds. Teaching content and virtual environment that are presented or combined individually. The application of VR technology can enable learners to enter the learning environment at any time and place without being restricted by time and space, and to arrange the
progress of learning independently. To carry out the practice experience of vision reality. In the repeated exploration, give full play to the initiative of the subjectivity and practice of learning.

Experience

Mcluhan sees the media as an extension of man then, the VR is a comprehensive realization of all kinds of human perception of the extension. The VR technology has been able to reach an even greater level of auditory and visual complexity. VR features sound, graphics, and text. It greatly improves the learners’ perception level.—Realistic learning scenarios, multi-sensory stimuli, and dynamic human interaction created by VR technology. It enhances the immersion of learning and brings the positive emotion of relaxation, pleasure and fun to the learners. Therefore, it is helpful to stimulate the learners' interest in active learning, so as to facilitate the smooth implementation of teaching activities. For example, in introducing the scene of the life of the riverboat people, by using the virtual scene created by the VR technology, the learner can enter and feel the scene of the life of the riverboat people. This four-dimensional presentation, allow students more easily interest in learning than two-dimensional experience model.

Sensory

The theory of situational learning emphasizes the interaction between knowledge and situation, and thinks that learners construct knowledge on their own initiative in certain situations. By creating a learning situation with a real sense through the VR technology, learners can take the initiative to construct knowledge in the virtual learning situation. For example, in medical practice teaching, the use of VR technology can simulate the various parts and functions of the human body, and achieve a simulation of symptoms and treatment, nursing effects. Provide approximately authentic medical and nursing training conditions. In physics experiment teaching, virtual physics laboratory is constructed using VR technology to simulate real phenomena. It can display physical phenomena in visual way, observe the experimental process and understand the experimental results by operating the virtual environment. In the practice teaching of chemical engineering major, students are made familiar with all kinds of operations by setting up the experimental operation scene of virtual chemical unit. We can design the key operation, fault setting, hidden danger and so on in the laboratory into a real three-dimensional world. In the history teaching, the VR technology can also be used to restore historical events and historical situations. To enable students to experience the situation in person, so as to gain a deeper understanding of the relevant historical knowledge in the textbook.
TREND OF INTEGRATION

Natural Advantage

In the field of information transmission, the VR has the characteristics of image flexibility and variety, close to life, immersion, interaction, and profound experience. With its advantages in information dissemination, the VR has a natural advantage in combination with book publishing. Including three features.

The VR is immersed: The reality of the virtual scene makes it difficult for users to recognize the authenticity of the virtual scene, let the user have the feeling of being there. Simplicity: The VR goes beyond simple 3D simulation, the interaction between the user and the simulated scene is formed through the simulated scene. Real-time feedback strengthens the user's participation. Situation: The user can give full play to the subjective initiative in the virtual reality environment. To expand the field of cognition and enhance the depth and breadth of knowledge acquisition.

Technology

First, with the introduction of VR products by major tech giants, Refresh rate and screen resolution greatly improved. Continuous improvement in attitude correction, accuracy, delay, etc. The growing maturity of the VR technology, The declining cost of equipment. Basic class VR products poured into the market. Second, virtual reality technology is widely commercialized and civilian, and equipment is becoming more and more lightweight, convenient and refined. All things, such as technology applications and business innovation, have been promoted to rapid development. Hardware devices such as VR monitors are likely to become household electronic devices, like televisions and phones, in the next three years.

Content Investment

Virtual reality has become a hot spot for investment. The distribution of domestic VR financing cases in 2015 and 2016 shows that VR content production has become an investment area second only to the production of VR hardware. The integration of VR content production with various economic and cultural sectors has a clear pattern. According to foreign reports, by 2020, the market size of virtual reality and increased reality will reach 150 billion US dollars. In addition to hardware equipment, the largest share of the market is the content industry. Publishing companies should not miss this opportunity. It will also open a huge new content carrier platform for content production enterprises.
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