

Reading Summary Paper

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Introduction

The topic for the research conducted on the effects of using digital technology in education and training. This summary paper will specifically talk about the effects of using digital tools like Virtual Reality in education. The study considers various disciplines within the digital technology (Virtual Reality) in classroom. In this paper, three articles summarized and highlighted the main ideas and significant details of this study, the reasons to use virtual reality in education, and advantages and disadvantages of using these virtual realities in classroom.

Summaries

The first article studied, “Reasons to Use Virtual Reality in Education and Training Courses and a Model to Determine When to Use Virtual Reality” (Pantelidis, 2008), a research conducted at the East Carolina University in North Carolina is considered. The main purpose of this research was conducted on the use of virtual reality in education and training. The reasons to use virtual reality were discussed. Advantages and disadvantages of using virtual reality were presented. The educator or trainer must decide when and where to use VR. A model for determining when to use VR in any one course can help in making these decisions. Deciding when to use VR leads to decisions on where to use VR. The 10-step model was provided by Pantelidis (2008), to determine when to use virtual reality (Pantelidis, 2008).

The second article researched, “Virtual Reality and Education” (Helsel, 1992) provided a basic understanding of virtual reality from an educational perspective in order that readers can move to seriously address the educational issues as the research data and technologies mature.

Briefly, this article described: (1) the debate between conceptual and technological orientations to virtual reality; (2) the conceptual orientation to VR; (3) the technological definitions of virtual reality, artificial reality, and cyberspace; (4) dimensions of virtual reality; and (5) virtual reality's impact upon education (Helsel, 1992).

The third article “How VR in education will change how we learn and teach” researched how virtual reality can transform the way educational content is delivered (Babich, 2019). Before diving into the details of how VR in education will help improve the learning process, it’s important to understand why we need to improve the quality of education in the first place. While knowledge has become more easily available for more people, study in this article described two significant problems with the current approach in education. This article demonstrates few properties that makes virtual reality in education beneficial and powerful. It gives a better sense of place, where students can learn about a subject by living in it. Also, Technologies such as science labs allow students to understand how things work based on practical experience. This article categorizes VR educational experiences, such as, Virtual fields trips, High tech training, group learning, distance learning, etc. It also talks about giving students good VR experiences by Making VR accessible (Babich, 2019).

The last article “The Use of Virtual Reality in Education” (Nooriafshar, Williams, & Maraseni, 2004) conducted a recent research in the area of multimedia which has re-confirmed the importance and effectiveness of visual features in teaching and learning materials. According to the findings of the article, the visual aspects and interaction with the multimedia system are the most preferred features amongst the surveyed students. In the study, a survey was taken by

students, who have also indicated that the visual features play a very important role in understanding the concepts. In this article, an experiment was conducted by using the virtual reality multimedia, where students from two different backgrounds (Nursing and Business) were given a tutorial on topics related to basic human anatomy. After the completion of this tutorial, each student was interviewed and invited to provide comments and feedback. It was determined that virtual reality multimedia could enhance learning by providing much more realistic images and visual features (Nooriafshar, Williams, & Maraseni, 2004).

Discussion

Through researching these four articles, several implications were conveyed. From the article “Reasons to Use Virtual Reality in Education and Training Courses and a Model to Determine When to Use Virtual Reality” (Pantelidis, 2008), it is clear that the use of virtual reality (VR) in education can be considered as one of the natural evolutions of computer-assisted instruction (CAI) or computer-based training (CBT). Many studies have been conducted on the applications and effectiveness of virtual reality in education and training since the 1980s. Studies show that a virtual environment can “stimulate learning and comprehension, because it provides a tight coupling between symbolic and experiential information” (Bowman, Hodges, Allison, & Wineman, 1998). In the article “Virtual Reality and Education” (Helsel, 1992), it is determined that Virtual reality will bring about at least two major changes in the educative process. Learning via printed symbols in textbooks will shift to learning via simulations. Secondly, curriculum materials will no longer be predominantly text-based, but will be imagery and symbol-based. Virtual reality has the potential to move education from its reliance on textbook abstractions to experiential learning in naturalistic settings. For example, rather than reading about an historical

event, students could participate in the event and interact with simulated persons from that historical era. In the article “How VR in education will change how we learn and teach” the author demonstrated how VR technology can be used to engage students in topics related to geography, history, or literature by offering deeply immersive senses of place and time, simply by imagining geography lessons where you can visit any place on the globe — this type of experience is much more enriching than just reading about it. Of course, virtual reality will never replace real field trips and travels, nor should it. But, VR enables experiences to happen that would be otherwise impossible (Babich, 2019). In the article “The Use of Virtual Reality in Education”, the author reported from the study that visually rich multimedia can provide a very effective teaching and learning environment. A virtual reality multimedia can even further enhance learning by incorporating more realistic images and visual features. This would lead to a situation where the learners could immerse themselves in the environment and interact with objects and scenarios in a dynamic manner (Nooriafshar, Williams, & Maraseni, 2004).

Conclusion

As we have seen, virtual reality holds much potential in education now. Therefore, educators need to become involved now to plan for using virtual reality in future development, planning, and use with students in classrooms. The classroom teaching is embedded with the VR platform to actively involve the learners to improve their cognitive skills and achieve better grades with good academic proficiency. In closing, this article urges educators to become actively involved in virtual reality's progress because VR experiences inspires a whole new generation of young and bright students to get ready to transform and change the world.

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