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Article · March 2023

DOI: 10.5281/zenodo.7748468

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IJMRT: Volume (5), Issue 3, 2023
International Journal of Multidisciplinary Research Transactions
(*A Peer Reviewed Journal*)
www.ijmrt.in

ISSN (Print):2663-2381
ISSN(Online):2663-4007

Virtual Reality in Education

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DoI: https://doi.org/10.5281/zenodo.7748468

Abstract

This research paper explains what virtual reality is. What are two features driving virtual reality in food, medical, entertainment, education, industrial, military sectors and other major virtual reality applications? Examples of virtual reality in education - ease of management, device allocation Benefits of VR in education, including faster retrieving and deleting, better security, and better support for remote students. What are the benefits of virtual reality in education? What are the disadvantages of virtual reality in the education system? Virtual reality education frontier How is virtual reality changing the education industry? How will virtual reality impact educational learning? Why is it difficult to bring virtual reality into the classroom?

Keywords: Virtual Reality, Learning.

1. Introduction

However, the term "virtual reality" first came into use in the mid-1980s when VPL Research founder Jaron Lanier began developing goggles, gloves and other devices. It was when He called it virtual reality. But even before that, engineers were developing simulated environments. Using computer technology to create simulations that can be explored in 360 degrees is called virtual reality. Frame rate and latency are paramount to virtual reality in order to provide users with a smooth and enjoyable experience. Reduce actual resource consumption

and ensure operational reliability. VR can be adapted and applied in various fields, including the educational field. VR limits interpersonal contact and experiences. Actions taken are likely to become habits. May cause health problems for users. VR enables students with learning disabilities to learn about the world around them. We need to invest in equipment that is not cheap and can hurt our budget, like VR headsets. In this situation, students can also tackle assignments from home or through distance learning.

2. What is virtual reality?

Using computer technology to create simulated environments that can be explored in 360 degrees is called virtual reality. Unlike traditional interfaces, virtual reality puts the user in a virtual environment and provides an immersive experience. To achieve this immersion, a VR headset is used, which can be borrowed, for example, from the OISE library. Other notable examples of VR headsets include Oculus Rift, Samsung Gear VR, HTC Vive, Google Daydream View and Google Cardboard.

3. Key Applications of Virtual Reality

1. Food:-Virtually travel to different locations, immerse yourself in a specific environment, and taste the food from these locations. You can taste it.

2. Medical:- The Spanish National Research Council has successfully reduced the effects of Parkinson's disease in several patients using VR.

3. Entertainment:- Users can join the video game scene or participate in extreme sports without leaving the couch.

4. Education:- Using VR in the classroom helps students retain knowledge better and helps students with learning disabilities.

5. Industry:-Digital twins allow factory workers to practice and test in a virtual world An exact digital copy of a physical object.

6. Military:-The UK Ministry of Defence uses VR for training in simulated combat environments.

4. What are two features that drive virtual reality?

Frame rate and latency are paramount to virtual reality in order to provide users with a smooth and enjoyable experience.

4.1. Examples of Virtual Reality in Education

Nation and Society – Without Leaving the Classroom! Virtual field walkthroughs open up endless possibilities, allowing scientists to go anywhere and see anything. Instructors can explore abstract subjects by providing virtual and gestural reality, and bring real-world abstract subjects to life. By allowing scholars to witness and explore them and explore more abstract topics, they can visualize and engage with the content. In a way not possible with conventional literacy. Virtual reality offers a great opportunity for scientists to develop technology.

Advantages of VR in Education:

1. Faster Device Allocation and Removal:-

Students will be in school or college for a limited amount of time. Setting up a particular student's environment and removing it before completion is a manual and time-consuming process.

2.Ease of management:-

Manually install or update operating systems thanks to virtualization is not necessary to. Applications and other software on each endpoint. All this can be easily done from one central location, simplifying management

3. Improved security:-

Student and staff data is stored in a central database and not distributed across endpoints. Therefore, virtualization will also benefit the education sector by improving security.

4. Better support for remote students:-

Virtualization will allow students to stay connected to their homes when such situations arise. Or you can work on assignments remotely. Limitations of Virtual Reality in Education.

5. Benefits of Virtual Reality in Education

VR saves costs and time associated with setting up physical test stations. Exercise can be done anytime, anywhere. Ensure scalability of educational activities. Reduces actual resource consumption. Ensure operational safety.

VR can be customized and applied in various fields and education fields.

The VR enhances your ability to communicate and collaborate with people in remote locations.

6. Drawback of Virtual Reality in Education

1. Mistakes have no real consequences.
2. There is a chance to immerse the user in the virtual world.
3. VR limits human contact and experience.
4. Actions taken are likely to become habits.
5. May cause health problems for the user.

6.1. Limitations of Virtual Reality in Education

1. Limited Time:-

Setting up a specific student environment and removing it before completion is a manual and time-consuming process.

2. Easy to Manage:

Thanks to virtualization, operating systems can be manually No need to install or update with Applications and other software on each endpoint.All this can be easily done from one place, simplifying management.

3. Improved security:-

Student and staff data is stored in a central database and not distributed across endpoints. Therefore, the education sector also benefits as virtualization improves security. Or distance learning if such a situation arises.

How is virtual reality changing the education industry?

increase. For educators, it is important to inspire and encourage students to explore more possibilities and learn new ways to solve problems.

7. How will virtual reality affect educational learning?

VR for students with learning disabilities to learn about the world around them. As with elementary school students, immersive classrooms are the most popular. This form of VR is

designed to assist students with learning disabilities. There are also concerns about the adverse effects on children. Parents are also concerned about other factors such as exposure to violent or explicit content, social isolation, and excessive time spent in VR.

8. Why is it difficult to bring virtual reality into the classroom?

1. Virtual reality is expensive :-

You have to invest in gadgets such asVR headsets, which are not cheap and leave a hole in your budget.

2. Parental Concern:-

It can open and harm your child. Parents are also concerned about other factors such as exposure to violent or explicit content, social isolation, and excessive time spent in VR.

9. Conclusion

Virtual reality (VR) is proving to be a dominant force in both schools and gaming. Virtual reality in education benefits students by immersing them in the world. Learn new things. The conclusion is that virtual reality in education supports the learning process. Immersion has been shown to improve memory in virtual interactive worlds. As grants are sent to new projects, children learn new content-based learning methods. VR has established itself as a powerful learning tool for them. Student and staff data is stored in a central database and not distributed across endpoints. VR saves setup costs and time. a physical test station. VR limits human contact and experience. Actions taken become habits. may cause health problems for users. Parents Another factor they should consider is exposure to violent or explicit content.

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