

VIRTUAL REALITY (VR) IN EDUCATION AND ENTERTAINMENT: PROSPECTS AND CHALLENGES

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Анотація

У статті досліджено перспективи та виклики віртуальної реальності у сфері освіти та розваг. Проаналізовано вплив віртуальної реальності на освітній процес, розвиток креативності та поглиблень вражень у сфері розваг. Розглянуто технічні та етичні виклики пов'язані з використанням віртуальної реальності.

Ключові слова: віртуальна реальність, розваги, освітній процес.

Abstract

The article explores the prospects and challenges of virtual reality in education and entertainment. The author analyzes the impact of virtual reality on the educational process, the development of creativity and deepening of impressions in the field of entertainment. The technical and ethical challenges associated with the use of virtual reality.

Keywords: virtual reality, entertainment, educational process.

Introduction

Today, information technologies, including virtual reality, are developing at an unprecedented speed, and it is impossible to stop this development. Virtual reality has already penetrated various spheres of human existence, such as entertainment, education, medicine, business, science, construction and design, etc. It facilitates and helps people in their activities. There is evidence that virtual reality (VR) can help increase motivation and engagement among students. In the field of entertainment, this technology expands the possibilities of gaming and fully immerses a person in the process.

This study analyzes the impact of virtual reality (VR) on education and entertainment. The purpose of the study is to highlight the advantages and disadvantages of VR in the most common areas of human activity: education and entertainment.

Research results

Virtual reality (VR) is a technology that creates the feeling of being in another place or situation. It does this by using a combination of VR glasses that project images onto the eyes and headphones that transmit sound. This allows users to feel as if they are inside a virtual world. This technology is used in various industries and has significant educational potential. Virtual reality technology in education allows students to interact with real-life scenarios without leaving the classroom.

One of the primary advantages of implementing VR in education is that it provides a more immersive and engaging learning experience. VR can transport learners to difficult-to-access places, such as historical monuments, outer space or even within the human body. Students are able to better understand the subject and engage with the learning material when they are given a unique perspective [1].

VR provides the opportunity to create immersive learning environments where students can interact with material like never before. From learning about history to experimenting in physics, virtual reality is changing the paradigm of learning and making it more engaging and effective. Most students want to experience what they read or watch in a video. The use of VR allows them to overcome the limitations of verbal descriptions, illustrations in books, and videos. Thanks to VR, students can immerse themselves in a new environment anywhere in the world, learning more about a specific subject or sequence of events in space and time.

Implementing virtual reality in the classroom not only consumes digital content, but also actively engages students in creating their own. By developing creative concepts among students, we contribute to their success. Using powerful tools such as Tilt Brush for virtual 3D painting helps to increase creativity and creates new opportunities for students [2].

In the education sector, the ability to visualize data is essential to facilitate student comprehension. VR is a useful tool for learning visual skills, allowing students to more easily understand complex concepts instead of reading about them or working with tables. Training for professions is becoming more effective with the use of virtual reality (VR). Traditional methods, such as textbooks and career counselors, are complemented by the possibility of virtual career expeditions. VR allows students to get acquainted with the real conditions of different professions, improving their ability to imagine themselves in a specific work environment. This provides them with valuable experience and the opportunity to better understand aspects of different careers. And this is only a small part of the benefits and examples of how this technology can be used to improve and develop education.

The definition of the entertainment industry is quite broad. The following branches can be distinguished: movies and cinema, museums, galleries, music and nightclubs, arcades, and theme clubs. Thus, I would like to highlight some branches for a vivid example of virtual reality in the entertainment sector. Some technologies and methods may be common to all these industries. But each branch also has unique elements that open up new possibilities.

Film was one of the first examples of virtual reality in entertainment. The Cannes Film Festival was the first to adopt VR. In fact, in 2016, it was the first to broadcast VR presentations and short films in a special VR section [3]. Now it is possible not just to watch movies, but to be part of this experience. Creating videos in VR and the devices that play back the results create an extraordinary experience. The kind of experiences that fundamentally change the way people can interact with their entertainment.

Visiting museums and art galleries can be an interesting experience for both children and adults. You can learn about the past not just from texts and photos in textbooks, but also experience historical events as if you were there. And this is all thanks to virtual reality technologies. Previously, visiting the Louvre, one of the most popular and even the largest museums in the world, was a dream of many that was not always possible to realize. Now it can be done without any problems thanks to modern technologies. VR tours include Body in Motion, Emergence of the Artist, and Founding Myths: From Hercules to Darth Vader. And with the Art Gallery VR app, the way people perceive art galleries is changing. It's a new level that makes it easy to participate in Q&A sessions instantly, create paintings when inspiration strikes, and immerse yourself in the subject.

Virtual reality has the potential to improve education and entertainment, but it faces a number of challenges. In education, one of the biggest challenges is the cost of VR equipment. VR headsets can be expensive, which can limit access for some students. Another challenge is access to quality VR content. As the technology is still developing, there is a limited amount of quality VR content available for education.

In the entertainment sector, one of the biggest challenges is the lack of quality content that would appeal to the public. Despite the growing number of VR games and apps available, there is still a lack of content that appeals to all ages and interests.

VR is still in its early stages of development, and technological limitations such as low resolution and latency can affect the VR experience. Another challenge is socio-cultural limitations. VR may raise concerns from some people who believe it may be dangerous or unethical.

The cost of using virtual reality (VR) remains a significant obstacle, but this does not prevent its widespread adoption in education. Google Expeditions has become an example of how to achieve scale by providing affordable VR experiences to millions of students. Google Expeditions is a virtual reality (VR) platform developed by Google for educational institutions. It allows teachers to create and lead virtual field trips for their students [4]. The main approach to making VR learning accessible is to create content that is supported and runs on students' existing devices, such as smartphones. The main thing is to make the VR experience high-quality and accessible to students.

Conclusion

Virtual reality is not a fantasy of the future, it is our reality. VR has penetrated all spheres of our existence and has a great impact on education and entertainment. This is a big step forward in the education system. It significantly improves the learning environment and helps people develop. The use of virtual technology will make learning more interesting and engaging for students and increase the ability to study subjects more deeply, visualize and analyze.

And in the field of entertainment, you can immerse yourself in relaxation and development of your creativity. Creating video in VR and the devices that play back the results create extraordinary experiences. One that is fundamentally changing the way people can interact with their entertainment. The analysis highlights the main advantages of this technology and discusses the challenges and ways to overcome them that lie ahead with the introduction of VR in the entertainment and education sectors.

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