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REASONS, DISADVANTAGES OF USING VR IN EDUCATION METHODS

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ABOUT ARTICLE

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Abstract: The rapid development of technology has not gone unnoticed in the learning process. Although VR (virtual reality) technologies are no longer a new concept, they have only recently begun to be used in education. Therefore, in this article we will talk about the reasons for the use of VR in education, how it will change the future of VR education systems, how to use virtual reality technologies in education today.

INTRODUCTION

Enter. Some of the spread of virtual reality technologies in education there are reasons:

1. Reducing the price of technical equipment. In the last few years, the house and Prices for modern VR devices for professional use are significant decreased in level and made them more comfortable.

2. Rapid growth of software for VR. VR today There are several thousand different applications for , and their number is increasing every day is increasing.

3. Increase in the volume of investments in VR - from 2.5 billion dollars per year more than This figure has been steadily increasing since 2012 and is likely to does not plan to significantly stop its growth in the near future.

4. An increase in the number of large companies working in the field of VR. There are already more than 300 of them on the European market, and Oculus, HTC, Sony, Microsoft, Samsung and many other giants have been in this industry for a long time have been introducing their own technologies since then.

5. VR in a number of fields introduction of technologies: oil and gas industry, mechanical engineering, energy, metallurgy, telecommunications, advertising and others. Virtual reality is far just a game since time immemorial ceased to be a story and actively involved in all areas of human activity is being entered.

Take you through what and how VR is being used in education today for this technology is the future, as well as its prospects we suggest to consider in detail.

Literature analysis

V.A. Barabanshikov emphasizes that seeing psychological developments in the field of visual, tactile, auditory perception of emerging VR closely related to and based on them and polymodal human perception the nature and systematic structure of the mind (starting with mental imagery), working memory, perceptual hypotheses, actions, in general, to a perceptual event or system imitates [5]. A.E. Voiskunsky writes: “Computer graphics, by viewing three-dimensional objects using animation and programming created virtual reality (VR) is not only informational, but also psychological is also a product of technologies" [13]. This article is the first in Russia times, the person of the super images created with the Z 800 3D Visor helmet The impact on thinking has been studied, and in this literature, VR methods are used in psychology are separated as methods of science [6, 7]. Very few in the world today In most of the numerous VR developments, the authors use VR technologies as intelligence supports that learning and formation methods and tools [8, 9, 10, 11, 12]. It is known that the method in its most general form is to achieve the goal, a way to solve a specific problem, more precisely, practical or theoretical reality is a set of methods or operations of mastering (perception) [3].

METHOD

By 2022, ABI Research's analyst team states that the global VR market will grow to 5-6 billion dollars. And this according to experts, only Beginning. We already use VR in teaching successful use we know examples. For example:

• VR for gallbladder surgery successful training at Yale University tested. The VR user group is 29% faster and 6% less likely to make an error was less.

• Research on the impact of virtual reality on academic results in Beijing was held. Children were taught the same discipline, but one group - the classical method, the second - using VR. As a result, a test was conducted. The first group is 73%, the second and the group achieved 93% success. In addition, VR

group theme showed a deeper understanding and better consolidated the acquired knowledge (based on test results after two weeks).

• Cambridge Anthropology students from East China in 2018 and students studied the symbols drawn on the tomb on the Giza plateau. There is nothing unusual. Only two groups in the whole world was in other parts, and one person - directly in Africa. This is Doghead made possible thanks to the rumii VR program developed by It is virtual class was created and three-dimensional models of the studied objects were uploaded. And students, their avatars are real, thousands of kilometers away from them were at the research site.

• Google Corporation has been in the world's attention for several years is working on creating virtual tours to places of interest. For example, 2019 a virtual tour of the Palace of Versailles using 132,000 photos at the end started In addition, the Bolshoi Theater in Moscow, Buckingham in London palace and other cultural heritage There are tours to the facilities. And their number grows every year.

Obviously, the US and Europe countries introduced virtual reality in education remains a leader in But in this regard, Russia also strives to keep up with the times. from 2018 A number of large educational VR projects have been launched since:

- "Education-2024"
- "Digital school"
- "Modern digital learning environment"
- "Digital economy of the Russian Federation"

The "Digital School" project is one of the most ambitious projects. According to the organizers, until 2024 it will be used by all "pilot" educational institutions It is planned to introduce in 25 percent.

Reasons for using VR in education today.

Learning using virtual reality is an immersive technology based - enables a better perception and understanding of the surrounding reality a virtual extension of reality. That is, they literally know a person is taken to the environment of an event.

The immersive approach has several advantages.

1. Appearance. Virtual space is impossible or very difficult to observe in the real world allows a detailed review of existing objects and processes. For example, anatomical features of the human body, the work of various mechanisms, etc. Flying into space, diving hundreds of meters under water, along the human body travel - VR offers enormous possibilities.

2. Concentration. In the virtual world, there are almost no external stimuli for a person does not affect. It focuses entirely on the material and makes it better can master.

3. Participation. The scenario of the educational process with high accuracy programmed and controlled possible Students in virtual reality conducting chemistry experiments, to see wonderful historical events and complex problems more interesting and solve in an understandable way possible.

4. Security. In virtual reality, you are complex without any risk operations, traffic management skills you can upgrade, experience and much more. of the script regardless of its complexity, the student does not harm himself or others.

5. Efficiency. Based on the experiments, he used VR teaching efficiency is at least 10% higher than the classical format it can be noted that.

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