THE ROLE OF THE VIRTUAL LABORATORY IN THE EDUCATIONAL SYSTEM.

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Abstract: The concept of virtual is widely used in the field of computer science and information technology. For example: virtual machine, virtual memory, virtual disk, virtual communication, virtual travel, virtual classroom, etc. In this field alone, the concept of virtual is used in different forms and meanings and has different meanings. For example, in multimedia systems, the concept of virtual means virtual being.

Keywords*:* Virtual, Virtual Being, Virtual Universe, Virtual Museum, Virtual Reality, Virtual Lab

The concept of virtual (Latin Virtualis - possible, that is, occurring or can occur under certain conditions) means that objects and events do not exist in time and space, but are objective objects or sub ' represents a process in which the possibility of the realization of active images exists. The term "virtual being" was coined by Jaron Lanier in the late 1970s at the Massachusetts Institute of Technology. In 1984, he founded the world's first virtual being firm. The term refers to the idea of human existence in a computer-generated environment. The term "virtual being" was coined by American cinematographers. They released a film of the same name under the name of the possibility of artificial realization of imaginary possibilities, which for some reason could not be realized naturally.

Virtual being is an interactive technology that allows a computer to create the illusion that a person is moving in a real being. In this case, the perception of the objective being with the help of natural senses is replaced by artificial information created by a special interface, computer graphics and sound. A virtual being is something that does not exist in practice, it is impossible to touch it, to feel its taste and smell. Nevertheless, it exists and man enters this imaginary world and not only observes and experiences it, but also has the ability to influence it, to act independently in this world, to change it. The virtual world is a unique form of human existence and a special cultural expression of human spirituality. But a virtual being cannot be enjoyed like a real physical being, because the emotions that arise under the influence of this being are largely determined not by itself, but by how we perceive it. We can swim in the virtual sea, but our emotions depend on how we perceive this sea.

Virtual beings are created by people. Therefore, the source of everything that exists in a virtual being is the human mind. Consequently, a virtual being is made up of a physical being that passes through the mind, the subconscious, and the imagination. Virtual beings exist objectively, that is, in the computer, not in the human brain. At the same time, it is a product of the human mind. Once created by man, he continues to live independently of the human mind, which affects the mind in different ways, depending on the content of the mind - knowledge, emotions, moods and other elements of the mind. Today, virtual beings are used in various spheres of human cultural activity. Virtual being is used primarily in the field in which it came into being, in science, including physics, in modeling the dynamics of liquids and gases, in chemistry, in modeling chemical reactions, in geology and geography.

Virtual being technology is being used to create exercise simulators in education. Recently, the concept of establishing virtual libraries and museums was proposed. For example, in virtual libraries, a user can use a computer to navigate through a visual image of bookshelves, find and review the required literature, and copy it if necessary. The concept of a virtual museum is a bit different. The virtual museum allows users to see any exhibit in the collection in its natural, three-dimensional form. However, this requires more high-resolution displays. Thus, the virtual entity has evolved from theoretical research into an integral part of modern culture in which media and telecommunications are an integral part.

A virtual entity is an artificially generated information environment that seeks to replace the environment in the usual way with information generated by a variety of technical means. The creation of information visualization tools for the development of virtual reality tools for educational purposes can have a pedagogical effect that cannot be achieved with other technical means.

Virtual being is related to the concepts of immersion and interactivity.

Immortality means that a person assumes himself in a virtual being.

Interactivity allows the user to interact with and interact with virtual objects in real time. Types of virtual beings:

Passive virtual reality - passive observation of an autonomous graphic image that is not controlled by a person; The ability to select a script, image, sound, which is presented to the user in a limited amount of virtual entity to be controlled;

An interactive virtual entity is a user who can control a virtual environment based on the laws of the world, created using a special device that can perform the function of tracking; Tracking is designed to provide the coordinates of the location of a real object in the virtual environment (x, y, z) and the angles of its location in space (a, b, g).

By virtual being system we mean - we adopt imitation software and hardware. To ensure interactivity, the virtual system must take control actions. These actions must be multimodal, that is, visual and audible. Various audio and video technologies are used in modern systems to perform these operations in practice. For example, large-scale audio and video systems, as well as helmets and goggles mounted on the human head, "odor-sensitive" mice, control gloves, cybernetic signals are used in combination with the wireless interface.

The Impact of Virtual Being on Humanity:

- in the organization and regulation of human life;
- a new form of human communication;
- the positive impact of key areas of life on politics, economics, arts and tourism;
- with the virtual world, a person can create his own rules and environment;
- There is a delusion between life and the virtual being.

The development of virtual reality has been greatly influenced by the development of three-dimensional environments and the capabilities of Internet technologies. As a result, virtual reality began to be used in various fields. For example:

- The feature film TRON, made in 1982 in the world of cinema, was a big step in this direction. It is hard to imagine this industry today without virtual reality.
- The virtual drama created by BBS Radio in 2009 means that there is a future in this field as well;
- In the field of art in 1970, David Em opened the possibilities of this term with his first virtual exhibition;
- In the field of music, electronic musical instruments are a product of your virtual reality capabilities.

In the creation of virtual reality, information technology can not be formed without computer graphics, real-time mode and programming technology. OpenGL, Direct3D, Java3D, and VRML libraries of computer graphics are currently used, and programming languages C ++, Perl, Java, and Python are used.

Today, the concept of virtual travel has emerged as a result of the use of virtual reality in tourism. Virtual travel is a type of travel that is simulated based on multimedia applications. Text, image, sound, panorama, animation and video tools can be used as multimedia applications. The first virtual tour was organized in 1994 by Queen Elizabeth 2 at Dubai Palace.

It’s hard to imagine a virtual being right now without internet technology. The Internet is a miracle of the 20th century. Whoever is left behind, then the development of the virtual world will not be achieved. The Internet is a new dimension of human acceptance. It is easy to master on the one hand, and complicated on the other. Its simplicity is that the easiest way to program is to use a simple browser (Internet Explorer, which is available on all computers). This program is enough to use all the services of the Internet. This requires, firstly, knowledge and skills in the use of Internet services, and secondly, the services and information on the network are provided mainly in foreign languages. There are not many services and information published in Uzbek.

Everything in life is on the Internet, on the World Wide Web. If you master it perfectly: write a letter and get an answer in seconds; get acquainted, have round tables, participate in seminars, conferences; study in correspondence courses; learn a language, translate foreign texts, use dictionaries; you use; you read books,

newspapers, etc., you have a world library at home; you sit at home and do business and creativity; you do paid and non-paid activities; you travel the world; you enter a virtual (imaginary) life, and so on.
So, on the Internet, you can participate in all events and happenings in real and virtual life.

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