

HOLOGRAPHY AS A TEACHING METHOD

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Getting a high-quality education has always been considered one of the main values and priorities. Currently, there is a huge potential for human possibilities and desires. Thus, education does not stand still, but modernizes its achievements, focusing on a personal approach in the process of educational activities. Innovative technologies in education are becoming quite an everyday part of the educational process [4].

Now there are new opportunities to improve everyday life with the development of innovative technologies. The world does not stand still, so there are opportunities that push us to something new, which previously seemed fantastic. Accordingly, one of the best types of information representation is holography. The problems and prospects of its development are relevant and will remain so in the near future.

Holography is one of the ways to register information. You can record and then reproduce images of three-dimensional objects that are similar to real ones using holography (Fig. 1). There is no need for special glasses to observe the scenes or special positioning of the observer [1].



Figure 1. Holographic projection

Holography technologies are actively used by startups and large technology companies. Holograms become objects of art, they are used in museums, and they are used to present new products [2].

The hologram of the future can even be touched and felt. Having provided the opportunity to see and hear the hologram, a person will be able to touch the projection and feel the touch of it. Despite the claims of scientists that touching a hologram will not represent an exact textured sensation, a hologram will be able to let you know what it is. For example, you can definitely distinguish a live hologram of a butterfly from an inanimate one [3].

A large amount of educational work is assigned to the shoulders of the teacher. Innovative activity of the teacher allows conducting the educational process more efficiently

and comprehensively. Modern technologies in education play an important role for children who have health problems. Now they can study subject subjects through distance learning [4].

The holographic approach to learning provides tremendous opportunities. For example, the Cleveland Clinic, together with a local university (Case Western Reserve University), tested a new technology for teaching students using virtual technologies. "Students can see all the details, observe the processes going on in the heart with just a few clicks of their fingers," said Mark Griswold, a professor of radiology at Case Western Reserve University (Fig. 2). Compared to traditional body structure training, the use of holograms can significantly reduce the time, make the process more clear and understandable [5].



Figure 2. Hologram technology

Today, holography is developing, but its level is still insufficient for mass introduction into the daily life of society. The implementation problem is the lack of the ability to generate 3D objects in real time.

References

1. Hologram technology replacing cadavers to teach medical students – 2017: website. URL: <http://pro-spo.ru/virtualnye-mashiny/5227-gologrammy-dlya-obucheniya-studentov>
2. Fedorova L.N. Innovative pedagogical technologies in education: website. URL: <https://www.rastut-goda.ru/questions-of-pedagogy/6945-innovatsionnye-tekhnologii-v-obrazovanii-primery.html>
3. Putilin A. Holography: history and application: website. URL: <https://postnauka.ru/faq/82396>.
4. Pristavka E. How 3D holograms will be used in the near future – 2020: website. URL: <https://yandex.ua/turbo/hightech.fm/s/2020/11/05/holograms-future-technology>.
5. Yeletsкая D. How can holograms change our daily life? – 2019: website. URL: <https://yandex.ua/turbo/hi-news.ru/s/technology/kak-gologrammy-mogut-izmenit-nashu-povsednevnyu-zhizn.html>