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## Проблематика использования VR в обучении английскому языку

*Аннотация.* В статье рассматривается проблематика обучения английскому языку в школе с использованием виртуальной реальности. Критически осмысляются преимущества и недостатки рассматриваемой технологии, отмечаются потенциальные образовательные перспективы применения VR в учебном процессе по английскому языку. В качестве доказательной базы изучаются основные приложения на базе VR, которые можно использовать на уроках английского языка в школе для повышения мотивации обучающихся к изучению английского языка. Сделан вывод, что внедрение технологии VR может оказаться потенциально эффективным методом обучения.

*Ключевые слова:* виртуальная реальность, приложение, процесс обучения, иностранный язык, дигитализация образования.

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## The problems of using VR in English language teaching

*Abstract.* The article discusses the problems of teaching English at school using virtual reality. The advantages and disadvantages of the technology under consideration are critically analyzed, and the potential educational prospects for the use of VR in the English language learning process are noted. As an evidence base, the main VR-based applications that can be used in English lessons at school to increase students' motivation to learn English are being studied. It is concluded that the introduction of VR technology can be a potentially effective learning method.

In the modern world, the processes of technological, social and personal development are accelerating [5, p. 245]. Thus, advanced technologies are gradually being introduced into all spheres of life, one of which is education. Currently, there is a problem associated with the use of modern technologies in everyday foreign language teaching. According to experts in the field of linguistics and psychology, the best conditions for acquiring new knowledge are observed in childhood and adolescence [8]. However, lack of interest, absent-mindedness and the inability to focus on complex topics prevent effective learning at any age. The modern educational system competes with the entertainment industry and requires the introduction of perception methods that will help engage students in the process of learning new knowledge. Fostering interest in learning is an important stage that must be supported.

However, in the 21$^{st}$ century, it is not easy to interest students in acquiring new knowledge through drawings, watching old films or reading outdated literature, so devices with virtual reality (VR) and augmented reality (AR) support are increasingly used in the educational sphere.

In many countries, the way to new knowledge is still paved with books, pencils and heavy backpacks, and at the same time, not every child in secondary school is able to cope with the amount of material provided by traditional school education. To solve this problem, some foreign public and private schools have started using augmented and virtual reality technologies [2].

Virtual reality (from the English "virtual reality" – "virtual / artificial reality") is a world created with the help of technology and transferred to a person through his senses: hearing, sight, touch and smell [9]. Virtual reality allows one to move to any time and place, and the use of various sensors and peripheral devices makes such a world almost real:

• interaction – the ability to interact with objects in the virtual world: touch, move and explore;

• full immersion – special devices allow one to feel the conditions of being in a new world;

• diversity of experiences – the ability to experience different situations, from quiet walks to active adventures.

Today, virtual reality is actively used in the fields of entertainment and marketing, but this is only the beginning of its implementation. The most promising projects based on VR/AR technologies are manifested in the sphreses of industrial production, healthcare, corporate and children's education [7]. It is also worth noting a significant shift in the use of immersive technologies for school and university education.

Virtual and augmented realities are relatively new technologies, but their popularity is growing. Scientists are confident that digitalization of education will simplify the presentation of complex material, facilitate memorization and increase the motivation of students [1]. Research on VR/AR implementation effectiveness in education has been conducted for several years, which gives a start to the analysis of their use in the educational process.

Experts from Far Eastern Federal University, who developed a "roadmap" for the development of VR in Russia, believe that the introduction of these technologies into the educational sphere will affect the effectiveness of both school and online learning. This will ensure continuous professional development, and also make the educational process high-quality and accessible even in remote regions of the country.

In 2019, Microsoft conducted a survey that showed that virtual reality helps students with low academic performance overcome difficulties. The test results between poor and excellent students have become much closer due to the use of these technologies.

Equally important, VR provides students with the opportunity to independently and practically perform complex experiments and experiences that would be difficult to conduct in an ordinary ("classical") classroom setting. This strengthens practical skills and makes learning process more interactive and exciting.

The use of VR and AR in language learning allows one to create a rich and effective environment for acquiring new knowledge [3]. The most common areas include:

• simulations of real situations: students can interact with virtual characters in various scenarios (ordering in a restaurant, buying goods in a store, communicating on the street). This allows a teacher to create a realistic experience of communication in a foreign environment for the students and the latter can apply the acquired knowledge in practice;

• virtual classes – students can participate in classes while being in different parts of the world, that is, communicate with teachers and classmates. This helps develop group interaction skills and practical communication;

• cultural expositions – VR allows one to immerse in the culture of the country of the language under study through virtual excursions and interaction with heritage and historical sites. This expands the students' horizons of perception and deepens understanding of the language.

There are many virtual reality apps that can help a student learn a language and make the learning process more productive and fun. Here are some of them:

• Mondly VR: A virtual reality language learning app that lets a student interact with virtual characters in realistic scenarios such as shopping, ordering food, or checking into a hotel. The app combines voice chat, speech recognition, and VR technology to offer instant immersion, pronunciation feedback, dialogues that enrich learners' vocabulary, and interactive scenarios that make learning languages fun and easy.

• VR Learn English: A virtual reality English learning app that places a student in a virtual apartment. As they move around, they hear words for furniture and objects being pronounced and see how they are written.

• PanoLingo: An English learning app that uses virtual reality. Here, the user progresses through different levels and learns new vocabulary in a 3D space. As they move through places such as the bedroom, bathroom, kitchen, or office, they are given tasks. The commands are written in English, so learning becomes intuitive, allowing the user to learn words from context rather than through direct translation.

• VirtualSpeech: an educational platform that helps people master communication and language skills using virtual reality. The application tests new vocabulary in a game-like simulation mode.

The use of virtual reality in language teaching has a number of significant advantages [6]:

1. efficiency of material acquisition (due to multisensory learning (engaging the senses), information is acquired faster and more deeply);

2. increased motivation (games and interactive activities make the learning process more fun and attractive for students);

3. safe space for practice (VR creates ideal conditions for completing exercises and practicing tasks, allowing students to make mistakes and learn from their mistakes without fear of judgment).

Despite a large number of advantages, the use of VR in language teaching also has a number of shortfalls [4]:

• availability of technology: not all educational institutions can afford expensive VR equipment;

• adaptation problems: some students and teachers are not ready to quickly master new technologies, which leads to additional difficulties in learning;

• physical strain: prolonged use of VR headsets can cause discomfort and fatigue.

Using virtual reality to immerse oneself in a linguistic environment opens up broad horizons for learning foreign languages. This approach offers innovative methods and practical tools that make the learning process more effective and interactive. However, for the full implementation of such technologies, it is necessary to solve a number of problems related to accessibility, adaptation and physical comfort of students. As a result, given all the advantages and disadvantages of this technology at the moment, VR can become an integral tool in language education of the future.

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