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The Role of Virtual and Augmented Realities in Teaching Foreign Languages in Conditions of Digital Information Space

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Abstract: *This article deals with the problem of foreign language teaching in virtual and augmented reality. The virtual environment models some characteristics of the educational process, which are requirements in the communicative method of foreign language teaching. The article analyzes some training programs based on virtual and augmented reality. The authors of the article point out some aspects that exist in the real educational process and that can not be in a virtual space.*

Keywords: *foreign language education, information space, virtual reality, augmented reality, perceptual actions, computer-training programs, hyperstimulation.*

The rapid development of post-industrial society has given rise to a number of problems associated with the increase in the huge information field, changes in the methods of presenting information and, accordingly, the perception of the surrounding reality by the individual, with transformations in the structure and content of interpersonal interaction.

It is obvious that the modern young man perceives the world interacts in a completely different way and socially in it. The situation is not at all in his ideological attitudes, worldview principles, or even in his mentality and cultural environment in which he lives and is educated. Although the issue of moral and cultural education, training and development of modern youth is more acute today than ever, not only in our country, but throughout the world. And the reasonable organization of intercultural interaction in a globalizing space is key not only within the framework of foreign language education, but also in the educational system as a whole.

The main difference between a modern young man is the content of the surrounding information field, in which his perceptual system functions and in which his formation and development take place.

The perceptual actions of an individual constitute the activity aimed at obtaining, analyzing and clarifying sensory information obtained from the surrounding reality. Mastery of these actions provides the basis for the child's mental development already in the early stages of childhood ontogenesis [4].

Let us note one important point. According to the research of J. Piaget, the formation of cognitive structures that provide structuring of sensory information from the external environment and ensure the identification of objects and phenomena of the surrounding reality occurs in the process of the child acquiring experience of moving in space and acting with various objects [7], [8].

In the modern information world, many perceptual. actions are carried out by a child in a computer field [5]. Here you can think all you want about the use vs harm of computers and different gadgets,

but the fact remains: modern. Child more and more forms in some virtual. Reality created by a variety of devices.

Virtual reality (VR - virtual reality) represents the artificially created space on the model of the real world, with which a person interacts, partially or completely immersing into it with the help of technical devices.

The concept of virtual reality is often used with another term - «augmented reality» (AR - augmented reality), so there is a need to give a separate explanation.

Augmented reality is a real environment, supplemented by certain elements of virtual reality. Augmented reality is characterized by the presence of objects of surrounding reality, while virtual reality requires the creation of a completely artificial space in which objects of the real world are duplicated.

Today, the level of technical development allows you to immerse in virtual / augmented reality to involve all the senses of the person: vision, hearing, touch, smell, taste. Another question is that not all of these technical devices are widely available in the Russian education system. But this is a matter of the near future. In China and Japan today, special 3D-learning interactive classes have been created and are actively functioning, providing maximum immersion in the educational environment with 3D-glasses and 3D-helmets.

Described by J. Piaget, the experience of movements of a child in space, which is the basis of the formation of his consciousness, is formed today partly in virtual / augmented reality. However, its impact on the content of the child's cognitive experience is increasing year by year [7], [8].

In other words, the child moves more and more into the artificially created environment, there is formed independently of the micro and macro environment created by parents, educators and teachers.

Unfortunately, today the nature of immersion of the child in the virtual / augmented reality is largely chaotic and uncontrollable by adults. The adults are far from her. Their cognitive development at one time took place in the only possible then reality (if one does not consider as another additional reality the world of children's fantasies and dreams). Parents do not understand the mechanism of cognitive development of children through technical devices. Parents themselves lack the empirical experience of such knowledge of the world. This underestimates the consequences of immersing the child in virtual reality, its impact on the cognitive and emotional development of children, growing year by year.

In our view, the clip-like thinking of modern youth, so often mentioned in modern scientific pedagogical literature, is the result of that same underestimation of the influence of virtual / augmented reality on the cognitive and emotional development of the younger generation, lost educational opportunities.

What to do in the current circumstances? Of course it is possible, persistently insist on excluding the use of technical devices by children, especially in preschool age. In this case, even more problems will arise with the further socialization of the child in the rapidly developing information space. You can go by controlling the child's immersion in virtual/augmented reality, using its capabilities for the cognitive and emotional development of both preschoolers and schoolchildren. And here a number of questions arise for parents, educators and teachers, and methodological scientists. The main one is how to correctly and controlledly ensure a child's interaction with virtual reality in the process of educational activities, including when mastering foreign languages?

In our opinion, one should proceed from the features of virtual / augmented reality itself. These features are as follows:

1) the ability to perform more diverse actions with objects in order to transform them (modeling); 2) the brightness of the representation of images of objects (visualization); 3) visually perceived similarity with objects of the physical world (analogy); 4) the possibility of rapid spatial movement

(mobility); 5) automatic control of performed actions (automation); 6) stereotyping of actions (including speech); 7) the opportunity to join any achievements of world culture without leaving home (cost-effectiveness); 8) repeated playback of certain situations, including speech ones (simulation); 9) unlimited possibilities for dialogue interaction (interactivity), etc.

Thanks to the listed features, virtual / augmented reality is an effective means of teaching foreign languages. The virtual environment meets all the requirements of the communicative method of teaching foreign languages [6]. Let us recall these requirements once again: 1) creation of a foreign language speech environment, and a real one (a real native speaker, a real place of action in the country of the language being studied, the real use of cultural facts and artifacts of the country speaking the language being studied); 2) content richness of the foreign language educational space; 3) full functionality in the use of linguistic and speech material to express a wide variety of communicative intentions in a foreign language; 4) situationality in the use of foreign language material (training programs present real situations of cultural and speech interaction); 5) the use of authentic material, including colloquial and etiquette formulas that help and ensure real verbal communication; 6) inclusion of one's own, personal linguistic, speech and cultural experience in foreign language communication; 7) foreign language teaching, taking into account the student's educational results, the level of his cognitive and emotional development.

Virtual reality as a means of teaching foreign languages languages allows you to create an educational foreign language environment that is as close as possible to the real one. 20 years ago it was difficult to imagine communicating with a native speaker without traveling abroad or having him nearby. Today we can communicate fluently in different languages with their native speakers, without leaving home.

Moreover, a fictional character from a cartoon or comic book can act as a native speaker. This is relevant in teaching children of preschool and primary school age.

They are already familiar with some of the characters. Virtual reality is an indispensable tool in those educational and speech situations in the lesson, the creation of which is a difficult task to solve in foreign language lessons, for example, traveling on an airplane or on board a tourist cruise ship, talking with a passerby on the streets of London, visiting an English pub, preparing Yorkshire pudding, etc.

The process of developing intercultural competence becomes much more effective and tangible when children are not just told about the traditions and customs of a particular country whose language is studied in class, but are asked to perform a sequence of certain actions in virtual / augmented reality that reveal the essence of such traditions and customs. In the learning process using modern computer technologies, frame scenarios are formed in the minds of students. This allows them to subsequently correctly and adequately carry out communicative behavior in natural communication situations.

It should be noted: training using virtual / augmented reality supports the motivational basis of the educational process in foreign languages. The inclusion of elements of computer games in the lesson content or the use of various computer quests creates a positive atmosphere in the lessons and ensures a high level of development of all types of motivation (cognitive, speech, linguistic, linguistic, cultural, informational, educational).

In virtual/augmented reality, "hyperstimulation" of all functioning senses is achieved, which contributes to strong memorization and long-term storage of foreign language material in the memory of students.

The circumstances of reality created by virtual / augmented reality can evoke much more vivid emotions than pictures and videos. It's one thing to see Niagara Falls through photography or video, and another thing to stand on its slopes and, perhaps in the near future, even feel the splashes of water, feel the light breeze and coolness.

Below is a list of computer applications and programs available today that provide varying degrees of virtual/augmented reality immersion. They perform a variety of educational and training functions in the field of foreign language education:

- Quiz your English https://apps.apple.com/ru/app/quiz-yourenglish/id1192686552;
- Hidden Pictures Puzzle Play https://apps.apple.com/ru/app/hidden-pictures-puzzle-play/id1462177299;
- ABC Animals https://apps.apple.com/ru/app/abc-animals/ id1318229607;
- ABC Animal Toddler Adventures https://apps.apple.com/ru/app/abc-animal-toddler-adventures/id500099457;
- Monkey Puzzles https://apps.apple.com/ru/app/monkeypuzzles/id705145024;
- Speak– Practice your English https://apps.apple.com/ru/app/speak-practice-your-english/id1181737552;
- ClassVR https://www.classvr.com/ vTime XR
- Social AR & VR https://apps.apple.com/ru/app/vtime-xr-social-ar-vr/id104774041;
- Altspace VR https://altvr.com/ Mondly https://apps.apple.com/ru/app

Here is a brief description of some of the applications listed above. "Quiz your English" software is available for both Android and IOS operating system users. It provides an opportunity to practice, improve and test your English language skills in a competitive manner through quizzes on a variety of topics. The opponent in the game can be either a classmate, whom the user can invite through synchronization with a social network, or a random person. It is noteworthy that even a resident of another country can become this person. The winner is the one who answers the most questions correctly in less time. By earning points for games, the student moves up the standings. The table helps track progress based on national and world rankings. The app offers quizzes for people with different levels of foreign language proficiency.

"Hidden Pictures Puzzle Play" application is available for both Android and IOS operating system users. It ensures the formation and improvement of students' lexical skills and has great developmental potential.

Two similar applications "ABC Animals" and "ABC Animal Toddler" Adventures" are designed for the youngest students learning English. The functionality of the application allows you to learn the alphabet and vocabulary on the topic "Animals" in a playful way.

Monkey Puzzle software can be used in the early stages of learning a foreign language. It is suitable for teaching preschoolers over four years of age.

The application includes eight mini-games, the content of which is designed taking into account the requirements for passing the international Young Learners exam.

The "Mondly" application provides immersive simulations in which the user's avatar finds itself in various communicative situations in a foreign language. As part of computer simulations, the user has the opportunity, for example, to place an order at a restaurant or check into a hotel. "vTime XR – Social AR & VR" is a free application that allows you to develop a wide variety of communication skills by creating all kinds of social spaces for communication and relaxation in the language through your own created avatar.

The Altspace VR computer application is gaining incredible popularity among users around the world. The essence of the application is to organize VR meetings. The main advantage of the application is the ability to practice a foreign language in real time with a native speaker.

Thus, virtual / augmented reality is the space that ensures the functioning and development of the perceptual system of a modern child. Today, for the education system as a whole and for the foreign

language education system as part of it, it is important to discover and competently use the educational opportunities of virtual / augmented reality.

At the same time, do not forget that virtual / augmented reality cannot always ensure success in the intellectual and spiritual development of a child, in his conscious and lasting mastery of the foreign language he is learning.

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