



**Zaporizhzhia  
National University**



**AKADEMIA POLONIJNA  
POLONIA UNIVERSITY  
in Częstochowa**

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OF PEDAGOGY AMIDST THE EUROPEAN  
INTEGRATION OF EDUCATIONAL  
ENVIRONMENT: THEORY AND PRACTICE**

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## **VIRTUAL LEARNING ENVIRONMENT AND VIRTUAL REALITY FOR LEARNING ENGLISH**

**Opyr M. B., Panchyshyn S. B., Dobrovolska S. R.**

### **INTRODUCTION**

The Covid-19 pandemic and lockdown in 2020 have crucially changed our common living, as well as professional activity. Transformations have happened in each sphere of human life, particularly economy, healthcare, finance, culture, and, of course, education. The traditional method of offline learning has been completely replaced by online learning. Therefore, it has become very important for teachers to find ways to make online learning as effective as offline learning, or even more. It was not an easy task to switch to the new model of taking classes in the virtual environment. Despite the access to the Internet available almost for all teachers and students, teaching English on the platforms of distance learning was a challenge. Many educators and IT specialists have been engaged in the process of creating and improving effective virtual learning environment to be convenient both for students and teachers, to provide enough material required for successful mastering new skills, to give options for students to choose their personal pace of learning, to develop their specific interest, to simplify the process of assessing students' achievements in the process of distance learning, to maintain permanent contact between the participants of the learning process to discuss some ideas, to create joint projects, to get feedback. To be effective, the learning environment should catch students' interest and motivate them to learn individually. Teachers' task is to provide the students with the resources which will stimulate their progress. Apparently, learning English in that context is not an exception. Even more, English teachers can become leaders in that process, as a great scope of material is available in English.

Among the tools which can ensure success in the process of learning in the virtual learning environment, one of the most effective is virtual reality, providing the best options for those who are bored of pictures in the textbooks. Virtual reality is a modern tool which involved students in the process of learning by immersing in the virtual world.

### **1. The phenomenon of the virtual learning environment and its development in the world**

Virtual learning environment appeared as the space for learning in conditions of distance education, although not at the very beginning. Distance education was formally introduced in the late 60s by the establishment of the UK Open University to provide educational opportunities to those who might

have either missed or discontinued their education due to employment but want to upgrade their knowledge and skills in their spare time at home. Since then distance and open learning has spread throughout the world and at the moment more than sixty Open Universities are operating in different countries. White explains the concept of “distance education as the majority of educational communication between teacher and student(s) occurs non-contiguously”. According to her, it must “involve two-way communication between teacher and students to facilitate and support the educational process, and technology mediates this necessary two-way communication”<sup>1</sup>.

By using web-based technologies in the distance education system, new ways of teaching and learning were opened for teachers and students, e.g., digital classrooms. Also, it has changed the concept of distance, like walled libraries have been converted into digital and online libraries. Efforts have been made to incorporate computer-mediated communication into distance education which is evident from a considerable number of online courses and resources these days by most of the universities around the world.

Skinner was the first person who introduced the learning machine in 1960s at Harvard. It was the beginning of Instructional System Design (ISD) which was seen as a systematic and subject matter-oriented process. ISD introduced the Computer-based instruction (CBI) model. Then, Educational Systems Design (ESD) was introduced in the late 70s and early 80s and it was mostly based on the use of authoring languages. ESD focused on the learner and the learning process. ESD focused on the separation of method and content to allow designers to develop learning environments rather than packaged instruction. According to Lebow<sup>2</sup>, “ESD should have seven primary constructivist values: collaboration, personal autonomy, generativity, reflectivity, active engagement, personal relevance, and pluralism”. These 5 principles suggest that students are no more passive recipients but they are capable of constructing their own knowledge with guidance from the teacher. Students were encouraged by teachers to use online resources, explore their own interests, and be active in solving real-life problems. Computer technology was no longer considered the only vehicle for instruction. Thus, the cognitivists adopted the term computer-assisted instruction (CAI) which was a refined CBI model that was based on principles of both behaviourist and cognitive psychology. This conceptual model, however, still revealed a sequential and teacher-centred approach.

In the late 80s, a second generation of authoring languages emerged. These authoring tools used hypermedia and facilities specifically designed for handling the major functions such as text formatting, graphics and screen

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<sup>1</sup> White C. *Language Learning in Distance Education*. Cambridge : CUP. 2003

<sup>2</sup> McPherson M., Nunes M. *Developing Innovation in Online Learning: An Action Research Framework*. Routledge. 2004. P. 58.

design, and pre-defined templates. “Later in the 1990s, the rapid expansion of the web led to the development of integrated online learning environment known as virtual learning environments (VLE)”<sup>3</sup>. These VLEs (e.g. WebCT, Blackboard, First Class, etc.) became commonly used tools to design and develop online educational environments. These VLEs employed a common interface to integrate development tools and course management tools. A VLE is “linked with a portal, content management system, student records system and library systems”<sup>4</sup>. Portal is a web-based system for non-course related information and content management system stores, organizes and manages content. Student records system keeps details of students including personal details, assessment record, finance history, study history, etc. and library systems provide access to journal databases, catalogues, lending history, course-related resources, etc. The main learning and teaching functions of VLE are content delivery, asynchronous discussion, online assessment, student tracking, synchronous discussion and student tools<sup>5</sup>. To support these learning and teaching functions, a large collection of software has been developed to design, develop and maintain the daily activity of Web-based learning. “A common way of grouping the software is support, client, and server”<sup>6</sup>.

Support software is used to help students to support their activities within the online classroom. Client software provides the interface and server software provides a method for managing and distributing the information required to allow a group of students to communicate and share information. For designing a VLE, educationalists and developers should interact with each other in an integrated and systematic manner. Educationists are responsible for curriculum design whereas developers for application design and development. Both should consider the student as the focal point in the learning environment in distance education. They should select resources, tasks, interaction patterns between the teacher and peers, forms of support, and the format of study sessions, etc. according to the requirements of the distance student. Also, the student should be able to select, configure and manage the interface between themselves and the learning context.

The end of the 20<sup>th</sup> century was marked by the growing popularity of distance education in the Western world. The pandemic, however, fuelled its expansion to Ukraine. Due to the advancement in technology, the traditional

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<sup>3</sup> McPherson M., Nunes M. *Developing Innovation in Online Learning: An Action Research Framework*. Routledge. 2004. P. 65.

<sup>4</sup> Weller M. *Virtual Learning Environments: Using, Choosing and Developing your VLE*. Routledge. 2007. P. 58.

<sup>5</sup> Weller M. *Virtual Learning Environments: Using, Choosing and Developing your VLE*. Routledge. 2007. P. 100.

<sup>6</sup> Jolliffe A., Ritter J., Stevens D. *The Online Learning Handbook: Developing and Using Web-based Learning*. Routledge. 2003. P. 6.



classroom in an offline learning environment is being replaced by online learning.

Of course, many educators doubted about the efficiency of such learning, especially those which had long worked in the traditional class. Although there were a lot of online resources in English, English teachers said that only communication in a physical class can provide a proper result of learning the foreign language. However, it is worth noting that even those who were sure that it was impossible to learn foreign languages effectively outside a classroom, when a teacher is in no direct contact with students, must confirm now about the positive aspects of using distance learning platforms.

Learning foreign languages in conditions of distance education was a new reality both for teachers and for students. Apparently, all of them had to learn fast how the work in the new conditions. Teachers had to prepare material to present it in the form for students to be able to learn independently. To ensure the efficiency of such learning, the principal task was to organize a proper virtual learning environment. So, a virtual learning environment for learning English is a web-based platform that allows the students and the teachers to interact virtually and enhance the complete learning experience in English. It replicates the whole experience of traditional offline learning. One can easily create VLE using different software available. Thus, virtual learning environment should consist of various components, particularly curriculum mapping and planning, content management, and real-time communication.

VLE allows the teachers to monitor the student activities during an online lecture. It enables the teachers to organize different interactive activities like quizzes, taking a poll from students on a particular topic. Teachers can record the sessions or lectures so that the students can refer to them whenever they want. One can break the class into small rooms for group discussions. It enables the teachers and students to share whiteboards, documents, URLs, etc. It also helps in the assessment of the students.

Planning the whole curriculum of the course is the most important component of a virtual learning environment. It includes planning lessons, and the way you are going to assess your student throughout the course.

Content management covers things like creating content, storing it, and making it accessible to the students. To create educational and engaging content, the teacher should spend most of the time on content creation.

An English teacher should try to add multimedia like videos, images, etc., which will help his/her students to understand the concepts clearly. He/she can also create some animated videos, and these are some of the best content in terms of engagement. After creating very good content, the teacher has to make it accessible for the students. The teacher can send a copy of his/her content to his/her students individually, but the best way to do that is to upload

the content to the cloud storage so that any of the students can access it anytime from anywhere.

Real-time communication is only applicable to teachers when they are teaching through live sessions. Real-time communication becomes more important when it comes to teaching English because one can learn English only by communicating with others. Real-time communication can be done by video conferencing or audio conferencing. It is also very useful for clearing the doubts of the students. The most popular websites for real-time communication are Zoom, Google Meet, Skype, and Microsoft Teams.

Distance forms of learning are universal by their nature as they enable applying any tools and methods of learning. Distance learning, however, cannot completely substitute the conventional system of education, but it can become an effective supplement to the traditional methods. In that sense, the best variant is to use a blended model of learning a foreign language.

Good outcomes of the learning process depend on the properly chosen tools. Different tools have to be used for different components of VLE. All the tools can be divided into the following category:

– *Content creating or management tools.*

Selecting the content-creating tool depends upon the type of content a teacher wants to create. If the teacher wants to create the notes for his/her students in the form of a PDF or any kind of text document, the teacher can use any word processing software like MS-word, Google Docs, etc.

For teaching or explaining the concept to the students, the teacher needs more engaging content like a presentation, video, or any interactive game related to that particular topic.

For creating a good and attractive presentation, the teacher can use MS-PowerPoint, Canva, and Google Slides. For video, YouTube can be used if the teacher is teaching through live sessions.

If the teacher is teaching through self-paced learning programs, then he/she has to create personal content. After creating the content, the teacher has to figure out a way to make that content accessible for the students from anywhere at any time. It can be uploaded to cloud storage or stored on Google Drive.

– *Student assessment tools.*

Another important aspect of effective distance learning is to make a proper assessment of the students' results. Student assessment tools provide teachers to access the students throughout the course. It also records the performance of every student in a systematic manner. Again, there is a number of software/websites available, like Google Classroom, Google Forms, Plichers, Sorcative,

Selecting the assessment tools depends on the way the teacher is going to assess his/her students. Some websites provide assessments based on live quizzes, while some assess based on the assignment submitted by the students.

In traditional offline learning, students used to participate in multiple offline events, which help them to improve their personality, public speaking, and presentation skills. English teachers know the importance of those skills in their student's life. Events are a very important part of the offline learning environment.

Due to the pandemic of COVID-19, it becomes very difficult to organize any offline events. So English teachers can conduct some online replicas of the events for their students' overall development.

Among the main challenges faced by teachers when organizing offline learning is to keep students attentive. The teachers need to keep their students engaged in the online lecture because whatever time the teachers have put in to make good content will be of no use if the students are not attentive during the lectures.

The teachers can also deal with this problem by asking the question about the concept they are teaching, or they can organize a quiz based on the complete lecture at the end of the lecture and assess their student based on the quiz. By doing this, the students will be attentive throughout the lecture.

Incorporating new technologies into the teaching practice does not mean reinventing the pedagogic wheel. The learning principles that underpin many of the tasks, activities and approaches commonly used today can be improved, extended or even transformed through the considered and informed use of new tools.

Everyone should agree that the system of education in the future will be characterized by a rapid development and introduction of the technologies of distance learning. At the present moment, the political and economic situation in the world and particularly in Ukraine proves the importance of the knowledge of English as one of the most important criteria for assessing professional competencies of future specialists, who are going to work with the information being available in the world community, as well as to communicate with foreign partners on the professional and social issues. Today, non-linguistic higher education establishments change the status of foreign languages in the system of professional education. It is significant now not just to get specialized professional competences, but also to master a foreign language with a particular focus on professional knowledge<sup>7</sup>.

Considering the fact that foreign languages are the tools for successful future professional activity, teachers of higher education set the task to develop not just linguistic and speaking skills, but to provide information by means of professionally oriented texts in the foreign language, to teach professional vocabulary and skills of translating professional texts.

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<sup>7</sup> Про Національну програму інформатизації : Закон України від 4 лютого 1998 р. № 74/98-ВР / Верховна Рада України. *Відомості Верховної Ради України*. 1998. № 27–28. Ст. 181. (Редакція станом на 01.01.2022)

Nowadays, in the conditions of distance learning and access to the Internet, teachers are able to provide students with all necessary information (visual and audio, static and dynamic, texts or graphics, etc.). Students can store the information on their computers for as long as they need it, replay and review it, edit, print, etc.

Another good aspect is interactivity due to multimedia information and operative feedback from the teacher<sup>8</sup>. The course of English for the students of non-linguistic universities is primarily related to the focus on not just mastering the fundamentals, but learning a new language and the ways to use it, i.e. listening, speaking, reading, and writing. Another specific feature of learning a foreign language is its professional orientation that means the necessity to learn the foreign language for the following communication in the professional sphere.

## **2. Virtual reality as a sophisticated learning tool and its benefits for learning English**

Among the advanced tools which can keep students' interest to learning, especially English, is virtual reality. Virtual reality (VR) has the potential to take learning beyond the traditional online learning experience. It has benefits like enhanced engagement, improved retention, etc.

This sounds great and fits well with the communicative approach to language teaching, but good role-plays do take a significant amount of time and effort for teachers to prepare, and unbridled, contagious enthusiasm to motivate students and keep them engaged.

Virtual reality, with its ability to instantly, utterly convincingly, create context by teleporting a whole class of students anywhere in the world (or space or imaginary places) can firmly situate language. Not only can classroom walls fade into the background, but the barriers between distance students and those physically present in the classroom can also disappear, as students' digital selves interact with each other and even with virtual characters that can maintain eye contact and communicate in natural language. These affordances have far-reaching implications for lesson design that go well beyond traditional role-play scenarios.

The empiric nature of the VR system originates from three sources: immersion, interactivity and multisensory feedback. "Immersion" means the students are involved in or surrounded by the environment. The advantage of immersion is that it gives the sense of presence or feeling that the person is actually in the depicted world<sup>9</sup>.

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<sup>8</sup> Інформаційні технології в навчанні: навч. посіб. / за ред. Н. В. Морзе. Київ : Видавнича група BHV, 2004. 240 с.

<sup>9</sup> Schuemie M.J., Van Der Straaten P., Krijn M., Van Der Mast C. Research on Presence in Virtual Reality: A Survey. *CyberPsychology & Behaviour*. 2001. Vol. 4(2). P. 187.

Interactivity is the ability to control events in modeling by using the moves of the body which initiate the responses in the simulation. The goal of VR is to substitute the real world with the virtual one and let the user behave as if he/she is present in the real-life situation.

That empiric nature of VR supports the constructive approach to learning<sup>10</sup>. Constructivism is the theory of gaining knowledge which confirms that people get knowledge through personal experience. The theory proves that a student tries to assimilate a new experience within a clear and previously determined model. If the student is unable to assimilate new details successfully, he/she changes his/her opinion to adjust to the new experience. When we behave believing that the world is built in compliance with our world model, and disclose that it is not true, we should consider the new experience, change our model about how the world is organized, i.e. to learn through our experience. VR provides the environment for such active testing of hypothesis and therefore, provides a powerful environment for learning<sup>11</sup>. In VR model, a computer makes a model and depicts the environment where we can walk and interact with objects and imitate other people (normally they are called “agents” or “avatars”).

The virtual environment is usually a 3D world and often the virtual world tries to imitate the real world both by its appearance and behavior of the objects (e.g. simulation of gravity). However, one should note that it is not necessary that the virtual environment is similar to the real world. One of the advantages of virtual environments is that they can be used for simulating absolutely fantastic scenarios. However, for the goals of learning, virtual environments make models of the environment where students can work, and create a safe environment where scenarios can be checked whether they are too complicated or dangerous to be implemented in real life.

Scenario is a plan elaborated in detail to perform a task in the virtual environment. It consists of a list of actions and the corresponding virtual scenes (images). The longer the list is, the more real the virtual reality looks.

Nevertheless, the process is more complicated for those who create the simulations<sup>12</sup>. Depending on the way and mode of interaction with the user, there are such VR systems: 1) Desktop VR – when a user sits in front of the monitor and interacts with it by means of the computer mouse; 2) video imposition – by means of a video camera, the user’s silhouette is imposed on the 2D image, which is created by the computer and thus, the user can watch the screen and see his/her silhouette in the cyberspace, and interact with the

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<sup>10</sup> Winn W.D. Learning in Artificial Environments: Embodiment, Embeddedness and Dynamic Adaptation. *Technology, Instruction, Cognition and Learning*. 2003. Vol. 1. P. 87–114.

<sup>11</sup> Christou C. Virtual Reality in Education. 2010. URL: <https://www.researchgate.net/publication/272677840>

<sup>12</sup> Климяк В.С. Віртуальна реальність в освітньому процесі. *Збірник наукових праць Харківського національного університету Повітряних Сил*. 2018. № 2(56). С. 207–212.

virtual world; 2) immersion system – means the user is totally immersed in the virtual world with the sense of presence, can interact with two or more avatars controlled by people; 4) system of distant presence is a connection of distant sensors, located on any object in the real world with an operating person; 5) mixed reality is a combination of the systems of distance presence and a system which is based on virtual reality which combine real world which is observed visually or through a camera with the content imposed by the computer.

In spite of the relative novelty of the systems, they have a huge potential for training students in different fields, particularly foreign languages. V. Ye. Klymniuk names five principal advantages of applying VR technologies in education:

- Visibility. By using 3D graphics, developers can depict many processes in detail, even very complicated ones. Virtual reality cannot just provide data about some phenomena, but demonstrate them with high degree of detail.

- Safety. Students can try to do something by immersing themselves in the circumstances without any threat to their life.

- Involvement. Virtual reality provides the opportunity to change scenarios, influence the experiment progress or solve a problem in the form of a game that is easy for comprehension. During a virtual class, students can watch the past world through the eyes of a historical person or are able to travel across the globe.

- Focusing. Virtual world which captures the user by 360 degrees, makes he/she is completely focused on the material and not interrupted by external factors.

- Virtual classes. First person perception and the sense of presence in the depicted world are the main features of virtual reality<sup>13</sup>.

Different elements of virtual reality (cyberspace, 3D-graphics, simulation, 3D virtual tour, virtual panorama, augmented reality) help:

- to immerse in the interactive language environment, which performs due to computer-based systems;

- to develop a 3D model of a city, state or street, to add labels with prompts;

- to travel from one space to another by using special options and maps (navigator);

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<sup>13</sup> Климнюк В.С. Віртуальна реальність в освітньому процесі. *Збірник наукових праць Харківського національного університету Повітряних Сил*. 2018. № 2(56). С. 207–212.

– to move in the virtual space with the illusion of presence in the 3D environment<sup>14</sup>. By using 3D glasses and helmet, students are able to immerse in the atmosphere of the simulator, role-play, academic program, etc.

Today, the most promising direction to use virtual programs is to reproduce the social and cultural reality of countries where the learned language is spoken. It enables students to become participants of the linguistic, cultural, socio-cultural and communicative situation. Tools of the virtual reality significantly influence not only the audio-visual perception, but also enable interaction that contributes to more effective mastering of the language material. Such virtual presence in the interactive situation helps the student to feel real environment, to learn how to respond, explain and act in it. It is extremely important when learning language situations and training new skills (for example, when learning topics like In theatre, In a shop, Kinds of transport, Great Britain, USA, Travelling, etc), i.e. in such scenarios which cannot be reproduced in a classroom. For the learning purpose, tools of virtual reality can be used to organize educational tours, lectures, seminar, practical and laboratory classes. Apparently, such technology can be also used in the process of self-education.

Application of the tools of virtual reality is able to transform the methods of gaining knowledge and diversify the educational process. Modelling the situations assists in studying and examining their different variants. Students cannot just intuitively choose the best possible solution in each specific situation, but also analyze, study and examine details of different variants, proposed by themselves (when different parameters and conditions are changed), or random ones proposed by the system of learning. By changing and complicating them, students can make forecast about the expected result and check it. Students do not always need to explain their conditional roles and rules, but should just entertain their actions. Thus, features of VR include:

– Entertainment. VR can be identified as the environment for arbitrary activity of a person or a group of people limited in time. The VR scenario reflects students' interests and learning goal. Sense of the scenario in VR appears in the process of game or is present outside the game (for example, it is set by the goal).

– Gaining experience. VR is considered a part of pedagogics. Students' personal experience is a perfect basis for possible transformation of their personalities and training new skills.

– Importance for life. VR scenario is a unique social activity, necessary for students' development and their socialization.

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<sup>14</sup> Dominic Brennan. Virtual Reality Desktops for Vive, Rift, and Windows VR Compared. Jan. 3, 2018. URL: <https://roadtovr.com/virtual-reality-desktop-compared-oculus-rift-htc-vive/>

– Social role. In the interactive entertainment, students play the role regulated by a set of rules. Individual experience of students is different, even when they have similar roles.

– Simulation. The simulation is based on creating a model, which represents real life (problem) and is capable to respond to students' behaviour and the scenario organizers. During the simulation, participants can face the situations which are not often found in the real life.

– Cognition and self-awareness. VR and activities which are based on the edutainment (educational entertainment) help the teachers to learn more about their students.

Paul Driver (Anglia Ruskin University) and Lulwa Bordcosh (Southern California) for a long time have been studying the opportunity of using VR when learning foreign languages and actively implement that technology in practice. There are many pedagogical theories to support using interactive media, such as virtual reality. Some of them include:

– situational learning – VR and immersive video stimulate learning in context;

– embodied interaction – our body plays an important role in the process of our learning. Learning is not only a mental process, but also a physical one;

– active involvement – with VR and immersive video students actively control what they see when turn or move;

– spatial form of access – VR and digital games are the best spatial form of media existing today.

According to Paul Driver, expert in English as a second language, principles of learning which are basic for many tasks, measures and approaches used today, can be improved, expanded or even transformed due to new instruments such as virtual reality. He studies two important directions where VR can be used for learning foreign languages, i.e. role-play and virtual field trip<sup>15</sup>.

Role-play has long become the main element of learning foreign languages. Imaginary situations are useful for practical training of any language. They are the elements of the communicative approach to learning languages. Therefore, virtual reality assists in imaginary transformation of a class and creation of different contexts for communication. When students identify themselves in a different way “to become” another person or imagine to teleport to another place, their language experience significantly increases.

The second direction, mentioned by Paul Driver is virtual excursion, also called field trips. Field trips are great for language learners. They expose learners to different, authentic environments where they can learn new

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<sup>15</sup> Driver P. How Can We Use Virtual Reality to Teach English? URL: <http://www.cambridge.org>



language in context and practice communicating in a more unstructured way that is exciting, memorable, multisensory and integrated with subject content.

This type of activity is comfortably combined with the simple premise of the communicative approach: that language is best learned by using it to communicate meaningfully (rather than just through explicit grammar and vocabulary instruction). But rich experiential learning activities are not trivial to plan. They can be expensive and are often logistically convoluted and fraught with safeguarding concerns. This is why teachers often resort to just showing students pictures or short video clips of these exciting places.

In the virtual reality students can try to do something many times without the fear to make mistake and therefore, the programs based on the technologies of virtual reality are highly effective. Moreover, the reduced value of the objects of virtual world because they are just illusion, force students to create, try and investigate.

Thus, virtual reality can make actual and effective impact on the reality and the real world. Transition of something like new knowledge, skills or new experience from one reality onto another can be of great effect for students' development<sup>16</sup>.

Potential of virtual reality for linguistic education can be hardly overestimated – it is huge and can be used to fill in all the gaps and tackle difficulties. For instance, Google Expeditions provide significant content for teaching English and covers traditional topics included in the academic program of English. In the system of linguistic education, English teachers can be the first who actively use the technology of virtual reality because majority of the materials is developed and available in English.

Although virtual reality originates from the sphere of entertainment, but has developed and got its practical application in many spheres, including education. The main goal of virtual reality in education is to make the process of learning more interesting and effective. VR modelling provides deep understanding of materials by the students with its following application in the real life.

A convincing proof that virtual reality can be useful for education is in the specificity of human brain to memorize information, as it tends to remember 10% of what it reads, 20% of what it hears, and 90% of what it creates or models.

Virtual reality transforms the classical process of learning into an exciting experience. In a class, students are limited by the walls and feel lack of tools, whilst in the virtual reality there are no such limits.

Thus, VR tools provide many benefits for the learning process. Among them:

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<sup>16</sup> Волинець В.О. Віртуальна реальність у соціокультурному просторі сучасності. *Культура України*. 2016. Вип. 52. С. 120–128.

*Visualization.* The most obvious advantage of using VR in education is the advanced way of visualization. Virtual reality has become a unique instrument to depict objects, processes, locations and historical events.

*Higher quality of education.* Since visualization helps to understand and memorize information, students are immersed in the learning process and can apply the gained knowledge in practice. VR can be introduced into any school, university and training program.

*Active participation.* In the 21<sup>st</sup> century, millennials and Z generation can sometimes be bored of traditional classes. Integration of VR into academic plans is one of the ways to enhance the learning process.

*No language barriers.* Foreign students sometimes face language barriers. In that situation, virtual reality can be of great assistance as materials can be presented in any language.

*Improved system of assessment.* Researches confirm that immediate reward positively influences the further efficiency of the students' work. Instead of traditional mentioning about mistakes and failures, VR introduces game aspects in the learning process and thus, motivate students to work.

VR content was primarily used for scientific courses. Nowadays, companies have launched new software for VR available for all courses created according to the demands of colleges and universities. Among the most popular are Unimersiv, which is one of the largest platforms for VR-education. The company developed different VR content for schools and corporate learning.

Discovery channel has been working over the programs helping students to learn more about our world and exchange knowledge. They launched Discovery VR application providing virtual videos about the most unbelievable places on our planet.

The system of distance education contributes to more active learning of foreign languages by non-linguistic students, as it provides more language practice by means of the Internet, online communication with native speakers<sup>17</sup> and, of course, due to the technologies of virtual reality. In recent times, the influence of virtual reality, artificial intelligence and the metaverse in our daily lives has crucially increased. This influence has also been very noticeable in English language learning in many parts of the world.

There are purely pedagogical reasons for using VR for language learning too. Good language courses already include the 4Cs (critical thinking, collaboration, creativity and communication) and other life skills. However, it is becoming increasingly challenging to include all this in a relatively traditional language lesson, whether face-to-face or online.

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<sup>17</sup> Положення про дистанційне навчання (Затверджено наказом Міністерства освіти і науки України 16.10.2020 № 40) URL: [http://zakon4.rada.gov.ua/laws/show/z0703\\_13#n18](http://zakon4.rada.gov.ua/laws/show/z0703_13#n18)

## CONCLUSIONS

The future of language learning needs to be more contextualised, more active, more experiential, more task-based and problem-solving based. All of this can be more easily and effectively achieved in an immersive, interactive 3D environment where we can feel co-presence – the feeling that we are together in the same space, and where we can do things together physically to create experiences and learning that are memorable. For example, students can walk around in a virtual kitchen to see what food items are available, come up with a recipe and cook it together by collecting the ingredients they need, chopping them up and placing them in a pot to cook.

To sum up, one should agree that distance learning somehow assists in implementation of the modern educational paradigm with the mandatory components of personality-oriented learning, individualization and differentiation of educational activities, opportunities of independent learning, self-education and self-development of students. Distance learning is also a motivating factor in learning foreign languages, contributes to development of general cultural and professional competences of the students of non-linguistic specialties, and primarily, their foreign communication competence<sup>18</sup>. Transition to the system of distance learning requires from Universities to introduce advanced educational and technical means, as well as develop distance courses. Choice and organization of the content of learning foreign languages by students of non-linguistic specialties in the distance learning depends on the educational goal, choice of the model of distance learning, opportunities of software, competences of pedagogical staff and readiness of the educational process participants to interact in the network.

Creating good virtual learning environments is very important for teachers as well as for students because online learning is the future, as students can gain knowledge from anywhere and from anyone they want. Online learning gets a boost because it is very affordable and convenient for students.

## SUMMARY

Our common life, professional activity and education have been significantly affected by Covid-19 pandemics and lockdowns in 2020. Online learning has taken over the traditional method of classroom teaching. Switching to a new model of class learning in the virtual environment has become a challenge. It is not an easy task to create a learning environment which is effective, makes students interested and motivated to learn individually. Distance learning with its compulsory components of personality-oriented education, individualization and differentiation in curriculum activities, the opportunities for independent learning and self-

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<sup>18</sup> Що таке дистанційна освіта: як вона працює? URL: <http://www.vsemisto.info/osvita/2355-sho-take-vyshaoosvita-jakvona-prazjuje>

development, might help to implement modern educational paradigms. It also motivates language learning and developing the general cultural and professional competences, particularly foreign language communication skills, for students of non-linguistic fields. The teacher's goal is to provide students with the resources they need in order to make progress. Learning English in this context isn't an exception. Virtual reality is one of the tools that can guarantee success in virtual learning, as it is a cutting-edge tool that brings students into the study process by spending time in virtual worlds. For both teachers and students, well-designed virtual learning environment is essential because online learning is the way forward. Online learning is cost-effective and convenient for students, as it offers flexibility to gain knowledge in any possible way from anywhere and at any time.

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