

# Gaming in the Modern Multicultural Educational Space

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**Keywords:** Gaming, Game, Game Method, Gamers, Computer Games, Game Behavior, Multicultural Educational Space.

**Abstract:** The current state and prospects of using gaming in modern education is considered. Computer games as a non-standard innovative learning technology are quite effective because they form the ability to combine theoretical knowledge with practical activities. Different types of classification of computer games that contribute to a variety of educational and professional experience are analyzed. Gaming is considered as a multicultural phenomenon that has undoubted features at the national educational levels. The authors present the experience of using gaming technologies in the educational process at the Economic University. One of the results of the study is the emphasis on the prospects of using elements of gaming in language acquisition and acquiring intercultural communication skills.

## 1 INTRODUCTION

Game is an important part of a person's life at any age. In the process of development of thinking and personality formation plays, not only the educational factor, but also the nature of gaming activities play an important role. For a child, gaming is a leading activity, because during the game he learns the meaning and ways of using objects, as well as different options for social relations. In the life of an adult, gaming is an activity of modeling another type of activity for entertainment or educational purposes.

Humankind has been playing games since prehistoric times, starting with ritual games (for example, the rite of initiation); with the development of civilization, games have become increasingly complex and reflected almost all spheres of society: war, love, history, etc. The most sophisticated modern games are MMORPGs with multiplayer mode like World of Warcraft where thousands of users around the world are connected every minute, and millions of different actions take place every minute.

Today, computer games are often seen as a means of acquiring new knowledge, they play a learning role, because they simulate on different platforms different situations and options for the hero. They provide an opportunity to practice practical skills of any behavior. Game stages include instructions for actions in game situations, video clips with reference

information and test tasks that determine the player's readiness for the next stage of the game, which are formed in increasing order of difficulty.

Game method of teaching in the modern educational space involves determining the purpose aimed at mastering the content, the choice of type of educational and cognitive activities and forms of interaction between teacher and pupil or student. The formation of professional competencies of any specialist also actualizes the use of non-standard forms of education. One of such forms and methods is the game as a means of developing creative potential, gaining new skills, etc.

## 2 ANALYSES OF RESEARCH ON THE TOPIC

Herbert Spencer believed that the game is the result of excess energy in the body and is intended for its release. He noted the similarities between the playing of animal cubs and human children, and introduced the biological theory of games. On the contrary, according to Carl Gross, games are used to train physical and mental capabilities. In his opinion, the game arises as a consequence of underdevelopment of the initial adaptation to the environment.

Well-known Dutch historian and cultural theorist Johan Huizinga has written extensively about the games in life and culture. Along with the study of historiography and the theory of the origin and development of the world, the scientist considered the peculiarities of using games as an element of human life. In particular, Huizinga notes that the games are older than culture, because the games are inherent not only to humans but also to animals. In his opinion, human culture originates from the game, although the game does not pass into culture, but remains close to culture (Huizinga, 2016).

French sociologist Roger Caillois in his book "Les jeux et les hommes" ("Games and people") (Caillois, 1958) defined a game as an activity that necessarily has the following properties:

- joy: the activity attracts with its easy nature;
- demarcation: the time and place of a game are clearly defined;
- uncertainty: the outcome of the activity is unpredictable;
- unproductivity: participation in a game has no useful consequences;
- rules: such activities have rules different from everyday life;
- fiction: a game is accompanied by awareness of another reality.

Many psychologists have studied the ability to play and play games, including Melanie Klein, Jean Piaget, William James, Sigmund Freud, Carl Jung, Lev Vygotsky, etc. From a psychological point of view, the games are especially important at an early age, when the child's mind and character are formed. Children's games help children to develop not only physically, but also mentally and socially.

Well-known Ukrainian teacher M. Fitsula indicated that game methods are quite effective and are characterized by the following: presence of game models of an object, process or activity; activation of student's thinking and behavior; high degree of involvement in the educational process; obligatory interaction of students between themselves and the teacher; emotionality and creative nature of the lesson; independence of students in decision making; their desire to acquire skills and abilities in a relatively short time (Fitsula, 2002).

Through game activities, the individual abilities of students are better developed, because they do not feel the psychological pressure of responsibility, which is inherent in standard educational activities. A game teaches to act through action itself. Assimilation of knowledge is carried out in the context of certain activities, that creates a situation of need for knowledge. A game allows you to get rid of

patterns and stereotypes, it can change the students' attitude to any phenomenon, fact or problem. It stimulates the intellectual activity of students, teaches to predict, research and test the correctness of decisions and hypotheses, cultivates a culture of communication, and develops the ability to work in a team and with a team. Pedagogically and psychologically thoughtful use of a game stimulates mental activity. This increases intellectual activity, cognitive independence, and initiative.

Socio-psychological impact of a game is manifested in overcoming the students' fear of speaking, in the formation of a culture of communication, especially the culture of dialogue. A game forms the ability to make independent decisions, evaluate own actions and the actions of others, promotes the activation of knowledge.

The game approach is not the determining way of mastering educational material, but it considerably enriches pedagogical practice and expands opportunities of students (Kvon and Pavlova, 2021).

In the modern Ukrainian educational environment, the opinions of teachers, scientists and specialists about the use of computer games in the educational process are different.

In the computer games, as noted by O. Fedor, there are often two types of goals: and learning. The gaming goal is usually consists in obtaining a reward, which can be presented in the form of score, points, a place on the podium, a place in the rankings, virtual cups, awards, virtual cash prizes, etc. The learning goal is the acquisition of knowledge, skills, and abilities in any field through the implementation of activities according to the rules (Fedor, 2020).

Thus, in computer games educational and game components can be distinguished. They can be correlated in different proportions. If the educational component predominates, the game provides ample opportunities to reproduce the knowledge, skills, and abilities of their application and handling. If the game component predominates, the game can be used as a visual learning tool to increase interest in various issues and motivate their study.

One of the most important tasks that need to be addressed today is to determine the goals, place, and boundaries of using computer games in the educational processes. Solving this problem will allow conscious choice of content that should and can be learned by means of a computer game (Ardini and Manuel, 2018).

## 2.1 Research Methods Topic

In this study, we tried to find out the features of modern gaming as an important tool of modern educational and cognitive activities, assess its classification characteristics, outline genre diversity, and identify possible current areas of development of gaming technologies in modern education at the national and international levels.

## 3 COMPUTER GAMES IN MODERN CYBERSPACE

Modern computer games are very diverse and include many different types and genres. Some researchers point out that “the most effective are open ended computer games that allow productive creativity, design, experiments, etc.” (Smirnova and Ryabkova, 2021). Others point out that despite the fact that the history of computer games has more than 60 years, the industry was formed only in the 1980s. The Nintendo Entertainment System consoles were first released in 1983, and the games for the IBM PC appeared four years later. In the 1990s, with the advent of online technology, gaming practices reached a new level of development. In Ukraine, computer games have spread at a slightly slower pace due to objective social and economic reasons, but these games can be considered a prominent element of mass culture already in the 1980s (Dyachenko and Zozulov, 2018).

### 3.1 Classification of Computer Games

Computer games, or games for PC, console, mobile, tablet, browser, etc. are video games that are now very actively used by the users in cyberspace.

Among the wide variety of classifications (Bulander, 2010) there is the simplest classification of computer games, some components of which, obviously, can also be considered the most relevant for educational activities:

- quests: the hero performs tasks, communicating with other characters, looking for and using different objects, solving problems and puzzles;

- shooters are the games on reaction speed, so-called first-person shooters;

- role-playing games (RPG): the player can improve the abilities of his character by defeating enemies and completing tasks, as well as to sell and buy resources;

- strategies: one needs to control not a character, but the game process; it is often the development of a city/country/race;

- simulators that simulate driving a car, piloting an airplane, steering a ship or a spacecraft, or a sports game;

- logic games bring the player to consistent thinking, make one think outside the box and build logical chains;

- gambling and the like.

This classification is incomplete, there are many genres of computer games, they are transformed, and new ones are constantly emerging. Nevertheless, the most popular game genres today are the following:

- MOBA (Multiplayer Online Battle Arena). This is a team game that combines action, RPG, and real-time strategy. The player controls a character with unique abilities, who fights in one of two rival teams. To win, one needs to destroy the enemy base. The most popular games of the genre are Dota 2 and League of Legends (LoL).

- FPS (First-Person Shooter). In first-person shooters, the gameplay is based on fighting with firearms or any other weapon. Unlike other shooters, the player perceives what is happening through the eyes of his character. The top games are Counter-Strike: Global Offensive (CS: GO), Tom Clancy's Rainbow Six Siege, Overwatch, Valorant.

- MMORPG (Massively Multiplayer Online Role-Playing Game). In massive multiplayer online role-playing games, players actively interact with each other in a single world and perform certain tasks. These games appeared as RPG subgenre. The most famous game is World of Warcraft.

- Battle Royale. The genre of royal battle has emerged recently, it combines elements of MMO games and survival simulator with last man standing mode. Many players appear on the map, and their number decreases over time. The winner is the one whose character remains the last survivor. Player Unknown's Battlegrounds (PUBG), Apex Legends, and Fortnite belong to this genre.

- Sports simulators. There are various simulators of sports competitions. The most popular are team games such as football and basketball. There are also simulators of boxing, racing, billiards, etc. The top games are FIFA, NBA, F1.

- CCG (Collectible Card Game). Collectible card games have lost some of their popularity in recent years, but still have a large audience. Players collect their own collections of cards released in separate sets, and make their decks from them. They compete with each other with these decks.

Hearthstone, Magic: The Gathering Arena belong to this genre.

- Auto battler. Autobattlers emerged as a modification of MOBA. Eight players fight with each other, forming their armies and improving units. The four players who last the longest win. The popular games of the genre are Hearthstone Battlegrounds, Teamfight Tactics, Dota Underlords.

It is worth noting that games of different types form a special experience for gamers. Strategy games give a lot of knowledge about different kinds of objects, their development and interaction. These games develop logical thinking, the ability to take into account various factors, plan their own actions and anticipate possible moves of the enemy. They give great potential for intellectual development. Simulators develop reaction speed, sensorimotor coordination, the ability to perceive spatial images; they give way to emotions and the realization of unattainable desires; these games can develop certain skills, such as driving a car, and they are often a great game exercise to learn new skills (Jackson and Morsi, 2007).

Quest games, adventures with a plot are a separate area of life, namely social life, as friendly contacts are established among the players, and communication goes beyond the game frames. Online role-playing games require a fairly high degree of mastery of computer skills (networking, and often knowledge of foreign languages) (Kobyneec, 2020).

### 3.2 Gaming and the COVID-19 Pandemic

In 2020-2021, the number of fans of computer games has increased significantly, as after the quarantine restrictions related to COVID-19, the whole world began to move to the virtual world. Attitudes toward computer games have also changed. This is no longer a way to “kill time” and have fun, but also a method of gaining new knowledge, a separate system of learning and making money (Mukhidin, 2020).

Unlike many other industries, 2019-2020 has been a growth point for gaming. Self-isolation and social distancing have led users to spend significantly more time in the virtual world, and their involvement in games has broken all records. In 2020, 70% of people started spending more time with mobile devices (Nadtochiy, 2021).

For example, Facebook studied gaming on its platform. They surveyed 13,246 respondents from nine countries and presented in the final version of the report the results on new (those who did not play mobile games before the first pandemic, but started to

play at least an hour per week) and old (those who played mobile games before the first peak of the pandemic, and continued to play at least an hour per week) gamers from Germany, South Korea, the United States, and the United Kingdom (Zamostyanova, 2021).

In the US, UK and Germany, new gamers are much younger than old ones. In South Korea, the situation is different: new gamers are older and prefer more casual games. Interestingly, in all the countries analyzed by Facebook experts, new mobile players spend more money on games than gamers who played before the pandemic.

Since the beginning of the pandemic, the number of game groups and their members on Facebook has increased. From January to August 2020, more than 185,000 new game groups appeared, and more than 130 million participants joined the game groups. In the United States, the United Kingdom and Germany, these new gamers are 25-34 year old, and in South Korea, more than half of the new gamers are 18-24 year old.

Comparing the situation in Ukraine with world trends, the researchers note that “a typical Ukrainian gamer is pupil, student (66.6% of this social group play computer games), employee with higher education (33.1%), or unemployed (31.5%)” (Zozulov and Dyachenko, 2018).

## 4 GAMING AS AN INNOVATION OF THE EDUCATIONAL PROCESS: WORLD PRACTICE AND UKRAINIAN EXPERIENCE

Today, there is a new, special trend of transition from the purely entertaining nature of computer games to educational and entertaining one. New generation games are often filled with meaningful initial information, so they are used in education, specialized, and filled with special content. Many games of this type already exist as a separate type of innovative methods, and are used in the educational processes in different countries, taking into account the national educational specifics (Smolsky, 2006).

*This War of Mine.* In 2020, for example, a computer game was for the first time added to the Polish school curriculum. The initiative belonged to Prime Minister Mateusz Morawiecki and concerned only high school. This War of Mine game, created by Polish developers, is based on real events. The game got 18+ rating in Europe, so it will be used from this

age in the school curriculum in literature (Kobyneć, 2020).

*Minecraft.* For example, computer game Minecraft has a separate version MinecraftEdu that has been used for many years in schools in the United States, Europe, and Australia. It is especially popular in studying geography, physics, chemistry, biology, and history. Game tools allow you to reproduce cities, study probability theory, conduct chemical experiments, and model the structure of the human body. Canadian researchers became interested in the phenomenon and found out that during the game children develop skills of teamwork and problem solving.

Minecraft is one of the most successful computer games today. As of 2017, its total worldwide sales exceeded 122 million copies, and the number of unique players reached 55 million. The game was developed in 2011. The gamer travels through a three-dimensional world comprised of cubic blocks. The gamer is free to rebuild this world, creating complex structures out of blocks. This makes Minecraft similar to the LEGO constructor. Minecraft does not set any clear goals for the gamers, but offers them many opportunities and activities: for example, exploring the world, creating a variety of structures and objects. The educational version Minecraft Edu is sold only to schools, individuals cannot buy it. The main feature is that the teachers can create a virtual world using their own methods of lessons. There are no fairy-tale characters and the ability to kill.

To confront children's addiction to the game or at least get it back on track, Microsoft has developed an educational version of the game, MinecraftEdu. This game is now used in Ukrainian schools, such as Britannica School.

In Swedish schools, Minecraft has been a mandatory part of the program since 2013. In Australia, the game is used in science lessons, in the United States — to study history. In Northern Ireland, the game platform has been installed not only at all high schools, but also at libraries.

The Ukrainian localization of the game has recently appeared. Now it has been introduced into the curricula of 92 schools in the country. Until January 31, Microsoft is offering schools running Windows 10 an annual free version of MinecraftEdu.

*Assassin's Creed.* Assassin's Creed is a series of multiplatform video games of the action-adventure genre, developed by the French company Ubisoft. The plot of the Assassin's Creed games focuses on crypto-history, according to which the main historical events are due to the confrontation of two secret societies: freethinking assassins and authoritarian

Templars. The developers of Assassin's Creed went even further. In 2018 and 2019, they released the additions Assassin's Creed Discovery Tour: Ancient Egypt, and Assassin's Creed Discovery Tour: Ancient Greece — real interactive textbooks on the history of Ancient Egypt and Greece. With the participation of professional historians, the game developers have prepared special short lectures on political system and philosophy, everyday life, wars and myths. The “guides” are real and mythical characters, and you can test your knowledge after each round. Millions of players have played the game in the “educational” mode. In one of the high schools in Richmond (California, USA), students used the game for additional extracurricular activities (AlFarsi and etc., 2020).

Entertainment or action games are shooters, platformers (platform games where the character jumps on different platforms), and fighting games. These games require speed of reaction and coordination of hand and eye movements. People who enjoy action games have high visual attention and spatial orientation. Professors the University of Geneva S. Green and D. Bavelier discuss this in their work “The brain boosting power of video games” (Green and Bavelier, 2016.). These games also develop the ability to switch between tasks, identify small objects, and focus for a long time on one thing. In experiments on the ability to concentrate on various factors, children who previously played a dynamic shooter showed a better result than children who did not play.

In video games, the load (speed or complexity) gradually increases. In this way, learning is individual, and everyone plays to the limit. Action games also demand constant adaptation, as new environments, tasks, and requirements emerge at higher levels. This forms the habit of “learning to learn”, because the gamer has to adapt to the new things, and this is an important skill for the modern student (King and etc., 2009).

It is a mistake to think that video games make children more irritable and aggressive. On the contrary, they can distract from painful memories and negative emotions, as well as reduce anxiety. Another positive effect of action games is the skill of planning. In order to play successfully, one needs to learn to predict the consequences of own actions and think strategically. If the game is dynamic, then the decision has to be made quickly enough. All these skills work not only in the virtual world, but also are transferred to real life.

German scientists S. Kuhn, T. Gleich, U. Lindenberger, R. Lorenz, and J. Gallinat studied the

effect of the game Super Mario on the brain (Kuhn and etc., 2014). A group of young people played daily for 30 minutes for two months. Afterwards, the researchers found an increase in the density of grey matter in the zones of the brain associated with navigation, strategic planning, memory, and motor functions.

Note that the winners of the most prestigious video game award The Game Awards in 2020 are mostly serious and high-quality action games that teach to analyze, think strategically, and offer new experiences (Zubchenko, 2020).

*The Last of Us Part II*, which won first place, is a continuation of the best game of the last decade, according to Metacritic users. The game shows the world 20 years after the pandemic, which has changed a lot: infected people have become barbarians, and survivors are ready to kill each other for food, weapons, and personal gain. The Last of Us is a survival-action video game developed by Naughty Dog. The game was released on June 14, 2013, and was highly praised by critics and users. At the heart of the plot is the relationships between smuggler Joel and 14-year-old Ellie, who may be the key to escape from a deadly pandemic that has struck humanity.

*Among Us*. One of the most famous games of recent years is also Among Us which won awards as the best multiplayer and best mobile game of the year. Among Us is a multiplayer video game on social deduction, created by the American company Inner Sloth on June 15, 2018. The game is performed in a space environment. Players have two roles: civilian crew members and impostors. The goal of civilians is to find impostors and neutralize them, and the goal of impostors is to kill all civilians. In 2018, the game did not receive wide publicity, but in September 2020, thanks to Twitch, YouTube and other platforms, it became popular, with 1.5 million simultaneous players. The game has inspired many users on stories, theories, drawings, and other creativity.

*Hades* on Greek mythology has become the best action game and the best independent game, i.e. game released without the help of a major publisher. Hades is a roguelike and action/RPG video game developed and released by the American studio Supergiant Games. The game was released in early access in 2018 as a temporary exclusive for the then launched Epic Games Store; the full version for Microsoft Windows, macOS, and Nintendo Switch was released in 2020. The plot of the game is based on ancient Greek mythology: the main character Zagreus, the son of Hades, tries to escape from the underworld of the dead and get to Mount Olympus; in this way he is helped by the Olympian gods who send Zagreus

certain gifts. Numerous adventures of Hades are connected by various scenes and dialogues which reveal the background of the game and the relationships of its characters. Hades got exceptionally high reviews from critics; commentators noted both the exciting gameplay and high replayability, and carefully elaborated characters and world.

*Animal Crossing: New Horizons*. This game was recognized as the best family game. Animal Crossing: New Horizons is a video game in the genre of life simulation. Users come to a desert island and have to arrange their lives. They create tools, home furniture, and street territory. The island varies depending on the time of year and time of day or night. The game was released on March 20, 2020. It quickly became popular in the world, including among celebrities. It has a circulation of 31 million copies worldwide.

*Microsoft Flight Simulator*. The best simulator of 2020 is Microsoft Flight Simulator (MSFS), the authors of which, with the help of maps and neural networks, recreated the planet Earth on a scale to each other. Microsoft Flight Simulator is a series of civil flight simulators manufactured by Microsoft. MSFS differs from many series of flight simulators by quite realistic physics of normal flight, and, as a consequence, the great complexity of aircraft control. The presence of almost all major airports in the world with realistic data, real landscape (the entire globe is simulated from the version Flight Simulator 2020), realistic weather conditions, excellent graphics make this series of simulators one of the best in its class. The games in this series include the use of autopilot, dispatch support, and the ability to download real weather conditions for flying from the Internet. The series includes traffic of aircraft flying on schedule and under the control of the ATC services. There are also built-in tools for flight analysis, repetition. There is a training course. The strongest feature of this series is its openness to create own models and airports.

Ukraine not only ranks 4<sup>th</sup> in the world in the number of certified IT specialists. It is also famous for developing its own computer games which are known far beyond Ukraine.

*Cossacks: European Wars* is a video game, historical strategy in real time, developed by the Ukrainian studio GSC Game World. The game is dedicated to the wars of the XVII century in Europe. It is one of the first Ukrainian video games widely known abroad. Released in March 2001, it features a remake of Cossacks 3, released in 2016. The project was continued with additions to the game and updates Cossacks 2. The release of a new version, Cossacks

3, was announced in 2015. The study of Ukrainian as a foreign language at the *Kyiv National Economic University* named after *Vadym Hetman* using the game *Cossacks* is quite promising. Foreign students learn new vocabulary and phraseology of the Ukrainian language, passing the levels of the game, and perform the tasks of the teacher directly in the game mode. This contributes to a deeper assimilation of theoretical material, and promotes the formation of practical communication skills.

*Venom. Codename: Outbreak* is a first-person shooter video game developed by the Ukrainian company GSC Game World and released by Russobit-M on October 8, 2001 for the Windows platform. The events of the game take place in 2034, when the Earth almost died from collision with a comet and hundreds of meteorites. Together with meteorites, spores of alien life forms were brought to the Earth, which began to develop rapidly in the terrestrial conditions. The game went on sale in October 2001. It was developed by GSC Game World.

*World of Warplanes* is a video game and client massively multiplayer online game in real time in the genre of arcade aviation action. The game is developed by Persha Studia in Kyiv (Ukraine), published by Wargaming.net. It became available on November 12, 2013. The time period of most of the aircrafts presented in the game is the “Golden Age of Combat Aviation” (the period between the First and Second World Wars), World War II, and the next decade. In October 2017, the update of *World of Warplanes 2.0* was released. This is the largest game project created in Ukraine: several hundred people have worked on the game in the Kyiv office of the First Studio (now a division of Minsk Wargaming).

*S.T.A.L.K.E.R.: Shadow of Chernobyl* is a video game in the genres of first-person shooter and survival horror with elements of role-playing games from the Ukrainian developer GSC Game World. It is also known as *S.T.A.L.K.E.R.: Oblivion Lost*. In the post-Soviet countries, the game and its sequel gained cult status with large groups of fans; a large number of books appeared, united by a common fictional game world and its modifications; various festival events and role-playing games were held. The popularity of *Shadows of Chernobyl* also gave impetus to the interest in the real Chernobyl nuclear power plant and industrial tourism.

*S.T.A.L.K.E.R.: Clear Sky* is a computer game in the genre of first-person shooter with elements of role-playing games, developed by the Ukrainian company GSC Game World and released in Ukraine on August 29, 2008.

*S.T.A.L.K.E.R.: Call of Pripjat* is a first-person shooter with elements of a role-playing game from GSC Game World, the second stand-alone addition to the game *S.T.A.L.K.E.R.: Shadow of Chernobyl*. The game was released on October 2, 2009.

Therefore, the best computer games today are massive blocks of information combined into entertaining story games. They have not only informational and cognitive components, but also often play an educational role, encourage learning and self-improvement, make conscious value choices, and so on. There are new kinds of games that are already often used in the educational processes in various fields.

## 5 GAMING TECHNOLOGIES IN THE EDUCATIONAL ECOSYSTEM OF THE ECONOMIC UNIVERSITY

For those who learn, the games already have a motivating function, and in today's global world this trend is becoming a leading one. It appears especially today, when, on the one hand, the dynamic nature of the educational environment is obvious, which should work in synchronous and asynchronous formats, change methods and technologies from traditional (in a classroom) to innovative, connecting it with the digital world; and on the other hand, there is trend to develop a well-established system of remote mastering the material and to be an important component of sustainably developing society. Each country has specifics for all possible common ways of mastering the digital space, and almost every higher education institution has its own specifics depending on the profile. All participants of the educational process — teachers, students, stakeholders — experience positive and negative changes: individualization of learning, independence skills, mastering new digital technologies, motivation for distance learning, and also communication problems, low level of digital literacy, etc. There are completely polar views on such educational communication as part of the general social sphere in a society that seeks stability in the face of pandemic challenges. In this context, it is interesting to relate to the game component of learning, as it is often associated with a negative social phenomenon. However, the above study confirms the prospects of special games as an educational technology and as an element of the educational environment of higher education, including economic. Two directions of

their use can be traced in the Kyiv National Economic University in recent years. The first one is related to career guidance activities which form a training contingent. The online format diversifies traditional events such as the Open Day. For example, it now takes place as an exhibition fair with master classes of teachers of various specialties, who actively use game components. Online meetings “Open the Kyiv National Economic University”, telegram channels, site “University entrant” create relevant info content for the entrants and maintain a positive “digital” image of the University in society.

The second direction is directly related to learning. Teachers of specialized departments are rather active in using the game tool for the formation of professional skills of students. Our experience of using elements of gaming in the educational process at the Economic University has shown their obvious prospects even for senior students, because it trains them before the next levels of professional knowledge through simulations of business environment or business entrepreneurial content. For example, there is a Laboratory of Financial and Investment Consulting at the Department of Corporate Finance and Controlling of the Economic University. There are different types of business and role-playing games with elements of video games. The head of the Laboratory Prof. Tetyana Mayorova points out that the game can be a simulation, but the lessons that students get from this simulation are a real, meaningful experience that changes their behavior in the long run. And the teachers who are interested in using such a powerful learning tool as “serious games” now have the opportunity to use new generation programs that allow quick integration of “serious games” into the learning process.

Teamwork and communication skills are well developed in an educational game. This is a very important competence in training future specialists and leaders.

Language is the most important tool of both social and professional communication. Therefore, the model of language education at the University of Economics includes native language courses with an emphasis on professional goals such as language culture of business communication or copywriting and mastering Ukrainian as a foreign language by foreign students and teaching foreign languages (including Polish), which increase the competitiveness of our students in the international labor market. Thus, the primary aspects are the active formation of language and communicative competence of higher education, and the acquisition of professional skills to work in a multicultural

environment. A computer game or its elements are increasingly used in the classroom. The students readily take part in this, obviously also because they have experience of active gaming in extracurricular time and gaming communication skills among their peers. For example, while studying Polish, the students at the Economic University use the famous Polish video game - survival simulator *This War of Mine*. As known, the game *This War of Mine* is recommended by the Ministry of Education of Poland at the faculties of humanities: sociology, ethics, philosophy, and history.

*This War of Mine* has a wonderful Ukrainian localization with not only the content but also the spirit of the game translated. This can be felt in special phrases, proverbs of characters or poems. The practical use of video games in classes at the Economic University, namely the study of Polish vocabulary, grammar, syntax in parallel with the existing Ukrainian localization, actively promotes the study of Polish by Ukrainian-speaking students.

The elements of game S.T.A.L.K.E.R. are partially used, for example, at the Kyiv National Economic University named after Vadym Hetman when studying Polish in groups of students specialized in Tourism, Urban Economics and Urban Planning. The use of the game method promotes better mastering of theoretical material, develops skills of creating interesting infographics, forms an original experience of practical skills of conducting excursions, etc.

The students of the Economic University can work in pairs or teams when studying Polish or Ukrainian as a foreign language. For example, they need to create a certain world — but how to do it if another team member does not want to do this? It is necessary to negotiate. In this method, we focus more on skills than knowledge. The students are interested, they perform tasks while studying linguistic and culturological educational material. After all, it is more interesting to do it, for example, in *Minecraft*, than just copying from a textbook.

## 6 CONCLUSIONS

Despite all the dynamism of the modern world, we strive for its stability to preserve the traditions in a reasonable combination with innovations. The educational segment of the sustainably developing society requires digital transformations of not only the competence characteristics of its participants, but also the educational content itself. Even the cursory results of our study confirm the assumption on the



actualization of gaming technology as an important means of achieving soft skills. In a society where knowledge rapidly becomes obsolete, it is important to educate professionals who will be able to communicate, argue, negotiate, work with information, and at the same time be stress-resistant. If “the life is a game”, then we can use the games, including computer ones, as a tool for success in life.

Computer games play an important role in modern life and education. The positive potential of most computer games is not always realized. It depends mostly not on the game itself, but on the gamer and prevailing motives in the game. In addition to the main motive of entertainment, the game can realize other motives. Due to the variety of motives, the game can help either prepare for or escape from reality. Depending on the secondary motives, skills and abilities completely different for different gamers can be formed. The implementation of the motive of training leads to the formation of skills in the field being trained, and the motive of compensation for internal problems is more likely to result from the mechanisms of psychological protection.

For the educational process, obviously, this aspect of using gaming technologies is relevant and promising today. The active use of these technologies in the study of foreign languages and the formation of intercultural competence of students deserve special emphasis, because dialogue with a virtual interlocutor can be a serious alternative to communication with a real native speaker in the virtualization of learning. In the context of adequate forecasting of social and individual consequences of using computer games in education, it is necessary to form national and international programs to study this multicultural phenomenon.

## REFERENCES

- AlFarsi, G., Tawafak, R., ElDow, A., Malik, S., Jabbar, J., Sideiri, A., 2020. General View about Games based Learning: Literature Review. *CESIT 2020 - International Conference on Culture Heritage, Education, Sustainable Tourism, and Innovation Technologies*, 139-145. DOI:10.5220/0010304801390145
- Ardini, P., Manuel D., 2018. The Influence of Engklek (Computer-based games) on The Ability of Recognizing The Emotion's Expression of Children In Kindergarten. *4th International Conference on Early Childhood Education. Semarang Early Childhood Research and Education Talks (SECRET 2018). Advances in Social Science, Education and Humanities Research*, Vol. 249, 8-15. <https://doi.org/10.2991/secret-18.2018.2>
- Caillois, R., 1958. *Les jeux et les hommes*. Gallimard. <https://www.gallimard.fr/Catalogue/GALLIMARD/Folio/Folio-essais/Les-jeux-et-les-hommes#>
- Fedor O., 2020. Features of computer games. *Transcarpathian Institute Of Postgraduate Pedagogical Education*. <http://zakinppo.org.ua/bezpeka-zhitt-dijalnosti/4269-osoblivosti-vikoristannja-kompjuternih-igor>
- Fitsula, M., 2002. *Pedagogy: A textbook for students of higher pedagogical educational institutions*. Publishing Center "Academy".
- Green, C., Bavelier, D., 2016. The brain boosting power of video games. *Scientific American*. #315 (1), 26–31. <https://doi:10.1038/scientificamerican0716-26>
- Huizinga, J., 2016. *Homo Ludens. A Study of the Play-Element in Culture*. Angelico Press.
- Jackson, E., Morsi, R., 2007. *Playing and learning? Educational gaming for engineering education*. Institute of Electrical and Electronics Engineers (IEEE).
- King, D., Delfabbro, P., Griffiths, M., 2009. The psychological study of video game players: Methodological challenges and practical advice. *International Journal of Mental Health Addiction*. #7 (4), 555-562. DOI:10.1007/s11469-009-9198-0
- Kobyneč, Y., 2020. Computer games and learning: combine, divide or ban? *Detector media*. <https://ms.detector.media/media-iditi/post/25141/2020-07-28-kompyuterni-igrj-ta-navchannya-poiednaty-rozdilyty-chy-zaboronyty/>
- Kuhn, S., Gleich, T., Lorenz, R., Linderberger, U., Gallinet, J., 2014. Playing Super Mario induces structural brain plasticity: gray matter changes resulting from training with a commercial video game. *Molecular Psychiatry*, #19(2), 265-271. <https://doi.org/10.1038/mp.2013.120>
- Kvon, D., Pavlova, T., 2021. The Search for an Educational Paradigm in the Information Reality. *1st International Conference on Education: Current Issues and Digital Technologies (ICECIDT 2021). Advances in Social Science, Education and Humanities Research*, Vol. 555, 33-38. <https://doi.org/10.2991/assehr.k.210527.012>
- Mukhidin, D., 2020. Using Multimedia Interactive in Online Learning in the Covid-19 Pandemic. *6th UPI International Conference on TVET 2020. Advances in Social Science, Education and Humanities Research*, Vol. 520, 11-14. <https://doi.org/10.2991/assehr.k.210203.076>
- Nadtochiy, Y., 2021. Sociocultural Factors Influencing the Quality of Distance Learning. *1st International Conference on Education: Current Issues and Digital Technologies (ICECIDT 2021). Advances in Social Science, Education and Humanities Research*, Vol. 555, 8-16. <https://doi.org/10.2991/assehr.k.210527.003>
- Bulander, R., 2010. A Conceptual Framework of Serious Games for Higher Education. Conceptual Framework of the Game INNOV8 to Train Students in Business Process Modelling in Proceedings of the International

- Conference on e-Business. *ICE-B 2010 - International Conference on e-Business*, 95-100. DOI:10.5220/0003033300950100
- Ningfang Liu, Ninghui Zhang, Guiqi Le, 2016. Research on the Teaching of Career Course of Internet plus problem. *4th International Conference on Management Science, Education Technology, Arts, Social Science and Economics (MSETASSE 2016). Advances in Social Science, Education and Humanities Research*, Vol. 85, 1507-1512. <https://doi.org/10.2991/msetasse-16.2016.324>
- Shuangwu, Li, 2016. Summary of Computer Processing and Editing Technology for 2D Animation. *3rd International Conference on Education, Management and Computing Technology (ICEMCT 2016)*, 1497-1504. <https://doi.org/10.2991/icemct-16.2016.314>
- Smirnova, E., Ryabkova, I., 2021. *Psychology and pedagogy of the game: textbook and workshop for universities*. Publishing House "URAIT".
- Smolsky, A., 2006. The world of computer games. *WORD*. #1 (26), 30-32. <http://dds.edu.ua/en/publications/publications/slovo/2006/302-videogames.html>
- Zamostyanova, Ch., 2021. How gaming has changed and what marketers can do about it: Facebook research insights. *Adsider*. <https://adsider.com/ua/yak-zminyvsia-heyminh-i-shcho-marketoloham-z-tsym-robyty-insayty-z-doslidzhennia-facebook>
- Zozulov, O., Dyachenko, A., 2018. Experience in the Segment of Auditors of Gamers in Ukraine. *Current issues of economics and management: a collection of scientific papers of young scientists*. Vol. 12. <https://ela.kpi.ua/handle/123456789/24656>
- Zubchenko, Y., 2020. Winners of the most prestigious video game award The Game Awards have been announced. *Media Sapiens*. <https://ms.detector.media/it-kompanii/post/26170/2020-12-11-ogolosheni-peremozhtsi-nayprestyzhnishoi-videoigrovoi-nagorody-the-game-awards>