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ЗМІСТ

ВСТУП	6
РОЗДІЛ 1. ІСТОРІЯ ВІДЕОІГОР	8
1.1. Рання історія	8
1.2. Пізніша історія.....	10
1.3. Епоха сучасності.....	11
1.3.1. Зростання онлайн-ігор	12
1.3.2. Епоха 3D- ігор.....	12
1.3.3. Зліт віртуальної реальності.....	13
РОЗДІЛ 2. ВІДЕОІГРИ В ШКОЛАХ У НАВЧАННІ	15
2.1. Як відеоігри можуть допомогти в навчанні.....	15
2.2. Вивчення англійської мови за допомогою відеоігор	16
2.3. Чому ми повинні використовувати відеоігри в освітніх цілях	17
2.3.1. Дебати про використання відеоігор в освіті	19
РОЗДІЛ 3. ЕМПІРИЧНІ ДОСЛІДЖЕННЯ	21
ВИСНОВКИ	26
СПИСОК ЛІТЕРАТУРИ	27
РЕЗЮМЕ	29
ДОДАТОК	30

CONTENTS

INTRODUCTION	6
PART 1. THE HISTORY OF VIDEO GAMES	8
1.1.Early History.....	8
1.2.Later Years	10
1.3.Modern Era.....	11
1.3.1.The rise of online gaming	12
1.3.2.The era of 3D games.....	12
1.3.3.The rise of virtual reality	13
PART 2. VIDEO GAMES IN SCHOOLS AND EDUCATION.....	15
2.1.How video games can help with education?	15
2.2.Learning English with the help of video games	16
2.3.Why should we use games for educational purposes?.....	17
2.3.1Debates about using video games in education	19
PART 3. EMPIRICAL RESEARCH.....	21
CONCLUSION	26
REFERENCE LIST	27
UKRAINIAN SUMMARY	29
APPENDIX	30

INTRODUCTION

To understand how video games can be used for educational purposes the definition of video games must be defined, the purpose of them created an popularity.

The shortest definition is: Video games are electronic games interacted with on a video screen. The longer definition: A video game is an electronic game that involves interaction with the user interface to generate visual and audio, or haptic feedback on a two- or three-dimensional video display device such as a touchscreen, virtual reality headset or a monitor/TV set, or haptic device.

Since the late 1980s video games became one of the most important parts of the entertainment industry, it has been disputed whether it is a form of art or not.

The electronic systems video games are played on are called platforms. Video games are developed and released for one or several platforms and may not be available on other devices, on which they would be played on. Specialized platforms, or devices such as arcade machines, which present the game in a large, typically coin-operated chassis, were common in the 1980s in video arcades, but declined in popularity as other, more affordable platforms became more available. These include electronic devices such as video game consoles, as well as general-purpose, or personal computers like a laptop, desktop or a handheld computing device. Since the 2010s, the commercial importance of the video game industry has been increasing. The emerging Asian markets and mobile games on smartphones in particular are driving the growth of the industry.

The thesis deals with the historical background of video games and video games could be implemented into modern education, concerning this topic the following questions will be answered:

- How video games were created?
- How could we use video games for educational purposes?
- What are the downsides of using video games in education?

The *main aim* of the study is to seek valid answers to these above-stated questions Furthermore, theories concerning the future of video games and their effect on learning are a matter for speculations among experts. Therefore, the *object* of the present study is to show the importance of video games and how they affect language learning. At the

same time, the *subject* of the paper is to discuss how video games can be implemented in everyday education, and how its full potential can be reached.

Because of the rising creativity-oriented teaching and English language teaching, this study *aimed* to show the hidden advantages of using video games in education.

The *theoretical value* of the study lies in the fact that it introduces the main theories, the important factors of video games. The advantages of video games inside, and outside the classroom are also highlighted.

The *practical value* of the paper shows different options, activities, techniques, methods of how a language learner can improve his/her language. In addition, the role of the teaching environment, as an essential part of the process is also discussed.

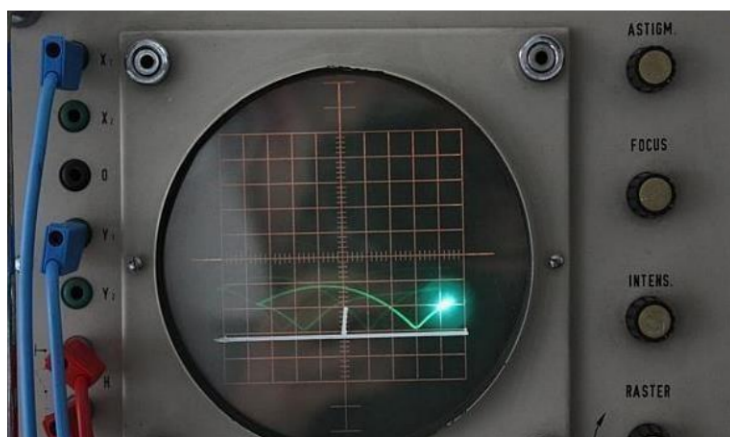
The thesis has been divided into an introduction, three parts, a conclusion, a Ukrainian summary, references and an appendix. The first part of the work mainly focuses on the historical background of video games. Part 2 focuses on the connection of video games and language learning. This part also discusses the probable drawbacks and as well as strong points of such aids. Part 3 is an empirical research within the result of the study are illustrated

PART 1. THE HISTORY OF VIDEO GAMES

In the first chapter the short history of video games will be discussed, their evolution from the very start, how they entered the mainstream media, and entertainment platforms, where are they now and what might be the future of them.

1.1. Early History (1947-1979)

Early games used interactive electronic devices with various display variations. The earliest example is from 1947—a "Cathode ray tube Amusement Device" was filed for a patent in 1947, by Thomas Goldsmith (2020) and Estle Ray Mann (2020), and issued in 1948. Inspired by radar display, it consisted of an analog device that allowed a user to control a vector-drawn dot on the screen to simulate a missile, or rocket being fired, which were drawings fixed to the screen. Other early examples include: The Nimrod computer at the 1951 Festival of Britain; OXO a tic-tac-toe Computer game by Alexander Douglas for the EDSAC in 1952; Tennis for Two, an electronic interactive game displayed on a oscilloscope engineered by William Higinbotham in 1958; Spacewar!, written by students of the MIT, Martin Graetz, Steve Russell, and Wayne (Goldsmith, Mann, 2020)



Picture 1 – Oscilloscope with the game Tennis for Two

Wiitanen's (2020) on a DEC PDP-1 computer in 1961. The biggest hit was game called Pong, which was modelled after the game ping-pong, or table tennis, in 1972 created by Atari. Each game used different means of display: the NIMROD device used a panel of lights to play the game of Nim, OXO used a graphical display device to play tic-tac-toe Tennis for Two used an oscilloscope as mentioned before to display a side view of a tennis court, and Spacewar! used the DEC PDP-1's vector display device.

In the early seventies, Computer Space, created by Nolan Bushnell (2020) and Ted Dabney (2020), was the first commercially sold, coin-operated video game in history. For its display it used a black and white cathode television, and the computer was made of 74 series TTL chips. Computer Space was followed by the Magnavox Odyssey, the first home console gaming device. Modelled after a late 1960s prototype console developed by Ralph Baer called the "Brown Box", it also used a standard television as a means to display the game. Later Atari's Pong games followed them; an arcade machine version and a home version that dramatically increased the popularity of video games. The commercial success of Pong led numerous other companies to develop Pong copies and their own versions, spawning the video game industry as a result of this.

A flood of Pong copies eventually led to the great video game crash of 1977, which came to an end with the mainstream success of Taito's 1978 shooter game Space Invaders, marking the beginning of the golden age of arcade video games and inspiring dozens of developers and programmers along with manufacturers to enter the market (Juul, 2005). The game inspired arcade machines to become prevalent in popular community locations such as malls, restaurants, and convenience stores. The game also became the subject of numerous newspaper articles and stories on television and in newspapers and magazines, establishing video gaming as a rapidly growing mainstream hobby and a form of everyday entertainment. Space Invaders was soon licensed for the Atari VCS, becoming the first "killer app" and quadrupling the console's sales for years to come. This helped Atari recover from their earlier failures and losses, and in turn the Atari VCS revived the video game market with the second generation of consoles, up until the North American video game crash of 1983. The video game industry was resurrected shortly after this by the widespread success of the Nintendo Entertainment System, which marked a shift in the dominance of the video game industry from the United States to Japan during the third generation of consoles (Rogers, 2011)

A number of video game developers emerged in Great Britain in the late 1970s and early 1980s.



Picture 2 – Pong arcade machine

1.2. Later Years (1980-1999)

During the broken gaming industry in the United States took several local businesses to declare bankruptcy and almost ended retail interest in video games, an 8-bit, third generation of video game consoles started in Japan as early as 1983 with the release of both Nintendo's Family Computer ("Famicom") and Sega's SG-1000 on July 15. The first clearly trumped the second in terms of commercial success in the country, causing Sega to replace it, two years later, by the improved and upgraded version named Sega Mark III. In 1988, Nintendo published their first issue of "[Nintendo Power](#)" magazine. It became one of the first gaming magazines ever created (Bateman, 2015)

By 1989 the market for cartridge-based console games was more than US\$2 billion(not adjusted for inflation), while that for disk-based v i d e o games was less than US\$300 million. Large computer-game companies such as [Epyx](#), [Electronic Arts](#), and Lucas Arts began devoting much or all of their attention to console based video games, along with the popular PC games.

In the 1990s Desktop based video games became more available to the everyday consumers, thus began the age of modern gaming.

In 1993, Atari entered the market of home consoles, and introduced the Atari Jaguar. Graphic adventure games continued to evolve fast during this period, with the formation of the point-and-click genre. Some of the genre's most prolific titles were being produced by the Sierra Entertainment and LucasArts studios during the 1990s, and Myst and its sequels inspired a new style of puzzle-based adventure games, which in later years became popular. It was in the 1990s that Maxis began publishing its successful line of "Sim"(simulation) games, starting with

SimCity, and continuing with a variety of other games, such as SimEarth, SimCity 2000, and eventually The Sims, which was first released in 2000 (Bateman, 2014)

In 1996, the 3dfx released the chipset called Voodoo, leading to the first affordable 3D accelerator cards for personal computers. These devoted 3D rendering daughterboards performed portion of the computations and memory-handling necessary for more-detailed 3D graphics, allowing for more-detailed graphics than would be possible if the CPU were required to handle both game logic and all the graphical tasks.

First-person shooters (FPS) were the first types of games, to take advantage of this new technology. Id Software's 1996 game Quake pioneered play over the Internet in first-person shooters.

Internet multiplayer ability became a "de facto" requirement in most FPS games since then, because of their popularity. Other genres also began to offer online multiplayer segments in the late 90s, including real-time strategy games such as Age of Empires, the Warcraft and StarCraft series. Developments in web browser plugins like Java and Adobe Flash allowed for simple browser-based games to evolve and develop (Bateman, 2014)

After many delays, during which Sony's PlayStation gained industry acceptance, Nintendo released its first 64-bit console, the Nintendo 64 in 1996. The console's main selling title was Super Mario 64, became a defining title for 3D platformer games.

1.3. Modern Era (2000 - present)

In this era of video game consoles, Sega exited the hardware market, Nintendo fell behind everybody, Sony solidified its lead in the industry, and Microsoft developed their first gaming console which was a big success.

Before the end of 2001, Microsoft Corporation, best known for its Windows operating system and its professional productivity software, entered the gaming hardware market with the Xbox. Based on Intel's Pentium III CPU, the console used a great deal of PC technology to leverage its internal development, making games for PC easily portable to the Xbox consoles. To gain market share and maintain its hold in the market, Microsoft reportedly sold the Xbox at a significant loss of profit and concentrated on drawing profit from game developing and publishing games. Shortly after its release in November 2001 Bungie Studio's Halo: Combat Evolved instantly became the driving point of the Xbox's success, and the Halo series became one of the most successful, and sought after console shooter franchises of all time. By the end of the generation, the Xbox had drawn even with the Nintendo GameCube in sales globally, but

since nearly all of its sales were in North America, it pushed Nintendo into third place in the American market after the PlayStation and Xbox (Dhritiman, 2020)

In 2001 Grand Theft Auto III was released, popularizing open world games by using a non-linear style of gameplay. It was very successful both critically and commercially and is considered a huge achievement in gaming. It was also yet another set piece in the debate over video game violence and adult contents, with advocacy groups saying the series' glorification of prostitution, the mafia, and violence, including that against first responders such as police and EMS.

1.3.1. The rise of online gaming

As cheap Internet connectivity spread, many publishers turned to online gaming as a way of innovating. Massively multiplayer online role-playing games (MMORPGs) featured significant titles for the PC market like RuneScape, World of Warcraft, EverQuest, and Ultima Online. Historically, MMORPGs that were console based, have been few in number because of the lack of Internet connectivity options for the platforms. This made it hard to establish a large enough community to justify the development costs. Every major platform released since the Dreamcast has either been bundled with the ability to support an Internet connection or has had the option available as an aftermarket modification. Microsoft's Xbox also has its own online service called Xbox Live. Xbox Live was a huge success and proved to be a driving force for the Xbox with games like the Halo series.(deHaan, 2010)

1.3.2. The era of 3D games

The decade was notable for producing the first truly "3D" games and consoles, introducing cloud gaming and virtual reality to the consumers, and the ever rising influence of and mobile based games. The industry remains heavily dominated by the actions of Nintendo, Sony, and Microsoft, but it remains unforeseen how their dominance will be affected by cloud gaming and the growing smartphone market.

Nintendo was the first of the big three companies to reveal their next generation console, doing so at E3 2011 with the unveiling of the Wii U, the successor to the Wii. The Wii U was released in North America, Europe, Australia and New Zealand in November 2012 and in Japan the following month. Reactions to the console were mixed, with many reviewers criticising the limited choice of launch games available, but later the attitude towards the the console changed. (Tardi, 2020)

1.3.3. The rise of virtual reality

Virtual reality (VR) is a simulated experience that can be similar or completely different from the real world, depending on the need.

Applications for VR can include entertainment (video games) and educational purposes (medical and military, amongst others). Other, distinct types of VR style technology include augmented reality as well.

Currently standard virtual reality systems use either virtual reality headsets or multi-projected environments to generate realistic, or life like images, sounds and other sensations that simulate a user's physical presence in the virtual environment. A person using virtual reality equipment is able to look around in the simulated world, move around in it, and interact with virtual items. The effect is commonly created by VR headsets consisting of a head-mounted helmet, which works as a display, with two small lenses in front of the eyes, but can also be created through specially designed rooms with multiple big screens around the room. Virtual reality most of the times incorporates audio and video feedback, but may also allow other types of sensory and force feedback through haptic technology (Babich, 2019)

In 2014, Facebook purchased Oculus VR for what at the time was stated as \$2 billion but later it was revealed that the more accurate estimation was approximately \$3 billion. This purchase occurred after the first development kits ordered through Oculus' 2012 Kickstarter was delivered in 2013 but before the shipping out of their second development kits in 2014, ZeniMax, sued Facebook for taking company secrets to Facebook; the verdict was in favour of ZeniMax.

In 2013, Valve discovered and freely shared the breakthrough of low-persistence displays which make almost lag-free and smear-free display of content possible. This was adopted by Oculus VR and was used in almost all of their later headsets. In early 2014, Valve revealed their SteamSight prototype, the precursor to both consumer headsets released later. It shared major features with the headsets meant for consumers including separate 1K displays/eye, low persistence, positional tracking over a large area, and fresnel lenses. HTC and Valve announced the HTC VIVE, the virtual reality headset with controllers in 2015. The set included Lighthouse tracking technology, which utilized wall-mounted "base stations"(sensors) for the tracking of the position of the person, using infrared light (Babich, 2019)

In 2014, Sony announced Project Morpheus, a VR headset for the PS4 video game console. In 2015, Google announced Cardboard, a do-it-yourself stereoscopic viewer: the user places their smartphone into the cardboard holder, which they wear on their head. Michael Naimark was appointed Google's first-ever "resident artist" in their new VR division. The Kickstarter campaign for Gloveone, a pair of gloves providing and haptic and motion tracking feedback, was successfully funded, with over US\$150,000 in contributions. Also in 2015, Razer unveiled its open source project OSVR.

By 2016, there were minimum 230 companies developing VR-related products including Amazon, Apple, Facebook, Google, Microsoft, Sony and Samsung all had dedicated AR and VR groups. Dynamic audio feedback was common to most headsets released that year. However, haptic interfaces are still not developed, and most hardware packages incorporated button-operated handsets or controllers for touch-based interactivity. Visually, displays were still of a low-enough resolution and frame rate that images were still identifiable as virtual.

In 2016, HTC shipped its first units of the HTC Vive SteamVR headset. This marked the first major commercial release of sensor-based tracking device, allowing for free movement of users within a defined space such as a room. A patent filed by Sony in 2017 showed they were developing a similar location, and motion tracking technology to the Vive for PlayStation VR, with the potential for the development of wireless headsets. The Oculus Rift S was released on 20 March 2019. (Rosie T. 2018)



Picture 3 – Oculus Rift VR system

In conclusion of this part, it can be stated that video games are a relatively new type of entertainment, but the video game industry grows larger every year. It is clear, that video games are a very popular form of entertainment and its industry is going to grow more in the coming decades.

PART 2.VIDEO GAMES IN SCHOOLS AND EDUCATION

The second part of this study will deal with the effect of video games in school and education, how can video games be used in education, and how it could help teachers and students

2.1. How video games can help with education?

According to Ali (2016) humans spend 3 billion hours playing with video games per week. That's a lot of time to entertain ourselves. But is that time wasted or can it be used effectively in education. The role that games play in educating is becoming increasingly obvious now that gaming is quickly taking over as the preferred time spending activity for many people around the world. But before we talk about education we need to understand the reason behind why gaming is so popular.

Why do people love spending so much time behind one or multiple screens?

Video games hit on a lot of our psychological needs. So much so that gamification, the application of game elements, like earning points and achievements, to non-game settings, is now a science and has a lot of psychological aspects to back it up.

People are essentially drawn to games for the following reasons:

- Games give us a clearly defined goal. In the real world the decision to pursue a goal, and deciding which goals to achieve, is left entirely up to us, but in the game we don't need to decide the game usually tells us which goals to pursue in one way or another.
- They hit on a deep-seated need to feel, and be productive in a way. They make us feel like we're making progress towards our goals even if these goals exist only in a digital world.
- They shoot short bursts of dopamine through our brains by rewarding us with badges, achievements, or new gear every time we achieve a goal to go further and further.
- They usually start simple and get progressively harder with time. This makes it easier for the player to dive into a state of concentration, to work towards our goal.
- Some games also have a social aspect to them, which can draw people in and keep them around to spend time with their new online friends.

The glue that holds all the above things together is the simple fact that gaming is fun. It's challenging, rewarding, and entertaining all at the same time, but games can also be educational. (Sandro, Simone et. al. 2011)

2.2 Learning English with the help of video games

In education we already use video games such as KAHOOT!, but there are multiple more that can be used for the advantage of practicing our language skill.

Multiple studies show that people who play video games have better progress in learning additional languages over the ones who do not play any video games. One of these researches was conducted by the University of Padua, resulting in an astonishing increase in the numbers of persons with reading difficulty. The first group used the traditional method of learning English,, the second group practiced with video games. The results were fascinating: nine sessions of playing video games for 80 minutes a day improved the children's reading ability more than a year of using traditional learning methods. Of course, video games contained enough text to make them worth playing. But if people choose the right kind of game, imagine how quickly reading, listening skills could improve for many people. And this is not the only research using video games to show that they can improve necessary skills (Rogers, 1984)

In the year 2013 in Japan, research was made to prove that playing video games helps to learn foreign languages, such as English. Six tests were conducted, each with a different student, and of different age, with video games of various genres for one month only. Each student studied English only in the classroom, before the research was made. All of the students showed improvement in their English skills, specifically in the vocabulary aspect of the tests they got. One thing must be remembered, that only two of the video games were made for educational purposes, the remaining five were not designed with educational purposes in mind. Despite the differences in the genres of the game the students had shown the signs of immense improvement after they played the games (Bateman, 2014)

Learning to read is extremely difficult for about 10% of all children all around the world, because they are affected by dyslexia of different stages. The neurocognitive causes of dyslexia are still highly debated topics among experts. Dyslexia treatment is far from being fully achieved, and the current treatments demand high amount of resources. Only 12 hour of playing action video games greatly improves the reading abilities of children with dyslexia. Children

were tested for reading, phonological, and attentional skills in two matched groups of children with dyslexia before and after they played action or non-action video games for nine sessions of 80 min per day for a month. Researchers found that only playing action video games improved children's reading speed, without any cost in accuracy, more so than 1 year of spontaneous reading development, and more than traditional reading treatments used in traditional treatment centers. Attentional skills also improved during training with video games. It has been demonstrated that action video games efficiently improve attention abilities; results showed that this attention improvement can directly translate into better reading abilities, providing a new, fast, and most importantly fun treatment of dyslexia (Mark G. 2002, p. 47-51)

2.3. Why should we use games for educational purposes?

Certainly there are many benefits of using video games in education. deHaan (2010), Richards (1995) and Fung (2017) have tried to use video games within a classroom setting. There are games that train to think in a systematic way, as well as an understanding for how different things affect each other. Video games such as Minecraft and Portal have been suggested as platforms for teachers in other countries to experiment with their educational abilities. Minecraft is a sandbox game in which the user can create objects using the crafting system of the game, while Portal is a physics- puzzle game: the player uses the laws of physics, such as gravity, to advance through the game's series of test labs. Critical thinking and problem solving are essential in the latter game's design. Both Minecraft and Portal can be adapted to some learning environments; for instance, Minecraft has been used for young children while Portal has been used by high school physics teachers. Portal 2 has also been used to develop cognitive skills in older undergraduate students, however, a 2017 study found that games such as Portal 2, Borderlands 2, Gone Home and Papers, Please may be used to develop a range of skills in undergraduate students, such as communication, resourcefulness and adaptability to certain situations (Fung, 2017)

Another study carried out by Rosie (2020) showed that using a video game as part of class discussions, as well as including timely and engaging exercises relating the game to class material, can improve student performance and engagements of subjects. Instructors assigned groups of students to play the video game SPORE in a new undergraduate biology course on evolution. The group of students that was assigned to play SPORE and complete related exercises, in a total of five sessions throughout the semester, had class scores about 4% higher than the non-gaming group on average. The game's inaccuracies helped to stimulate critical

thinking in students; one student said it helped him understand *"the fine parts of natural selection, artificial selection, survival of the fittest, and genetic diversity of species because of the errors within the game. It was like a puzzle."* (Poli, Berenetto et.al 2012)

Students who have played Europa Barbarorum had better knowledge of historical geography beyond the lessons during the basic ancient history course. They were able to identify the most important stages of civilization development in the case of states of the Hellenic era of Greece and were very knowledgeable about military history and the history of arts. This knowledge was in large part from the comprehensive descriptions included in the game; students also admitted that after playing the video game they were much more willing to turn to books dealing with the given historical period. However, whether or not this intention materialized into more reading of historical periods was not clear.

Another research by Fung (2017) studied teachers using Civilization III in high school history classes, both during and after school. In this study, not all students were in favor of playing a given game. Many students found it too difficult, too long and boring. Some students, particularly high-performing students, were not sure about how it is going to affect their studies; they felt that "Civilization III was insufficient preparation for higher education." However, students who were failing in the traditional school setting often did significantly better in the game-based unit, and the game seemed to get their attention where traditional schooling did not. According to Babich (2019) on the subject on interactive video games in physical education, many of these types of games are not just animated exercises. Many have different assessments and scores based on performance of different skills. Some have heart rate monitors and estimate caloric expenditure. Others are designed with enhancing motor abilities in mind. Abilities such as balance, hand-eye coordination, agility and core strength are a few of the motor skills enhanced. These engaging and interactive games have the ability to teach kids about the physiological functions of the body. Babich (2019) highlights on the fact that these games can help show kids how their heart reacts to different activities by using the heart rate monitor within the game. Another such device is a VR headset with motion sensors and controllers. In this kind of environment the player can move freely, and perform variations tasks with precision (Babich, 2019)

The study by Sandro, Simone (2019) et. al took the game Semideus to see if it could help to improve performance on rational number tasks, the understanding of whole numbers and mathematical thinking in general. The study concluded if kids were introduced to games that have math well integrated into the gameplay then it kids then it will help them with their skills.

The study recommended that the teacher be involved in the game based learning to improve its effectiveness in the students' learning.

According to Dhritiman (2020) simulation video games make the player learn to think critically while gaining knowledge of the environment that surrounds them in a given moment. The player learns to solve problems through trials and errors. Players are able to learn by doing and failing. They learn by experiencing things first-hand and role-playing. These virtual environments enable better learning, collaboration, and enhanced practical reasoning skills.

Video games are inherently incentive-based systems with the player being rewarded for solving a problem or completing a mission, while meeting certain criterias. (Natalia K. 2014, pp-11-15)

2.3.1. Debates about using video games in education

There are many debates going on about if it's good or not to use video games for educational purposes (Hing, 2020). There are many-many good reasons to use video games to educate, but there are multiple good points on the side not to implement them in teaching. Over the past decades multiple studies have shown the possible bad thing that may appear if one stays too long in front of the monitor. Multiple studies failed to explain the coherence between video games and violence, yet many claim that video game players are more violent than the other members of society.

One argument for possible negative effects explains how kids are already spending too much time with technology outside the classroom (deHaan, Kono, 2010) Many studies explain that over seven and a half hours a day are being used by children eight to eighteen on media outside of school, but one should not forget that media can be used to read news articles and to gain knowledge of the world faster than ever before. With this large amount of time being used by children using various forms of technology, this argument claims that the time spent on screens may be replacing critical face to face communication and can be negatively affecting children's face to face communication skills, which may be true. To find out if this was true or not an experiment was done where two groups of students were taken from the same school. One group had many different bonding activities without access to a screen throughout the course of five days. While the second group was allowed to use their devices how they normally do. To test their face to face communication skills both groups took pre and post tests for comparison. The

results suggested that those who went away for the five days did much better in reading facial emotions than the control group as one would naturally suggest. (Tardi C., 2020)

Over the years, the media have made various sensationalist claims about video games and their effect on the health and happiness of people. *"Games have sometimes been praised or demonized, often without real data backing up those claims. Moreover, gaming is a popular activity, so everyone seems to have strong opinions on the topic,"* says Marc Palaus, first author on the review, published in *Frontiers in Human Neuroscience*. (Ali S, 2016, pp 338-341) In summary many people state that video games shall never be allowed inside schools in fear of something they are not capable of understanding. (Plarium Staff, 2017)

In conclusion of this part, it can clearly be seen that using video games in education, and for educational purposes, has its benefits and drawbacks. Certainly, as anything video games are useful in moderation. Gaming can help develop certain skills, which are important in the learning process and can help develop ourselves further.

PART 3. EMPIRICAL RESEARCH

In this part an empirical research and the results will be introduced. Furthermore, the possible effects of using video games while teaching/learning English

Data collection and the questionnaire

The questionnaire was made in Hungarian language, to make it easier to fill it out. To collect data for the study, the participants were selected randomly and voluntarily. Each participant was sent a hyperlink leading to the online survey. The sharing and spreading of the hyperlink was controlled by the researcher. The questionnaire was conducted in English, Hungarian, and Ukrainian languages. The questionnaire was divided into 12 sections. The first three sections ask for background information of the participants. The concept of gaming and gaming frequency were investigated in the following ones. This was followed by a multiple choice question, gathering information of the type of games the participants prefer playing. The next questions asked for personal information about the games, game franchises they play or have played. Participants could give their own ideas. Finally, the questionnaire gathers information about the skills of language needed in and learned from gaming. All questions were mandatory. The questions are presented below section by section.

Gender

Age

Native Language

Do you play or have played video games before (whether on a desktopcomputer, laptop, console, phone)?

If you play video games, in what language do you do it?

What kind of video games do you play?

How much time do you spend on playing video games a day?

Do you think video games help in learning different foreign languages, and if yes, then how so?

How much have video games helped you to learn different languages, especially English?

What video games did you play that required you to use foreign languages, primarily English?

What video games would you recommend for those who want to learn foreign languages, especially English?

In which areas do you think your language skills have improved the most in the given foreign language?

Results

The first section will examine the background details of the participants. The data was analyzed using both quantitative and qualitative methods.

Of the 50 respondents who answered question one regarding respondent's gender 44 (88 %) were male and 6 (12 %) were female. As the results reflect more male participants filled out the questionnaire than female. Further on these results can serve as a basis of another study to analyze the gender distribution in more detail and showing the connection towards video games of both men and women.

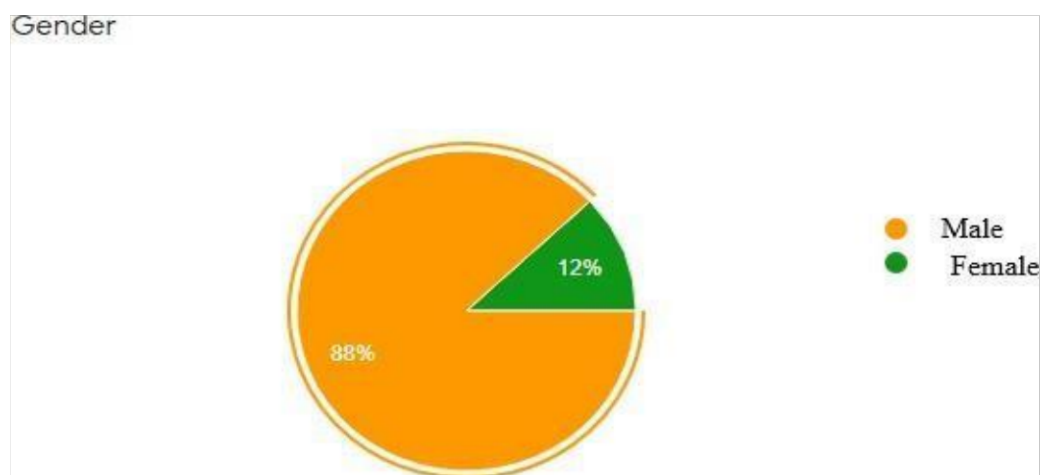


Diagram 1. Gender distribution

The second question shows us the age distribution of the participants. From the data we can see that age of the participants is various and it reflects on the fact that the participants are already familiar with English or they have been in connection with it in some kind of form.

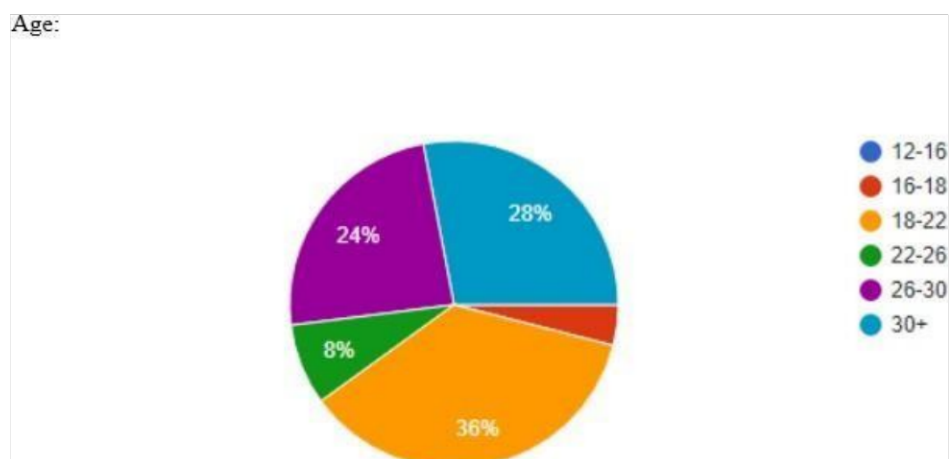


Diagram 2. Age distribution

The third question shows us what the native language of the participants is. Out of the 50 participants, 46 chose Hungarian and only two chose Hungarian and Russian, and another two chose Ukrainian.

In the fourth question the participants were asked do they play regularly or have they played video games before. Out of the 50 participants 50 said yes, play video games regularly or have played video games before.

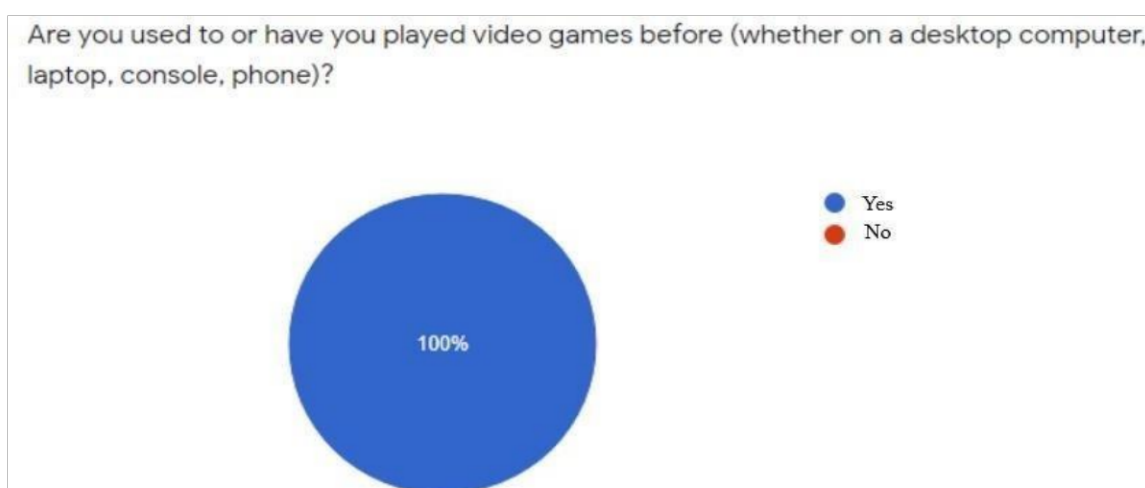


Diagram 3. How many of the answerers are playing video games

For the fifth question the participants had to answer a multiple choice question, in which they had to answer, in which language they used to play video games. The answers varied, but most of them play in Hungarian and in English. Only a few selected German, Ukrainian, Russian, and Japanese.

The following question was about what type of games the participants play.

14 predetermined answers were given from which they had to choose from, or give another type of game that they play. The answers have varied, but the first two were RPG games (Role- Play Games), and Action games with 44 votes each, the second most popular genre was Adventure with 18 votes, the third was Strategy with 34 votes.

The seventh question was about how much time they spend playing video games daily.

The answers varied, but usually they spend about 1- 2 hours a day.

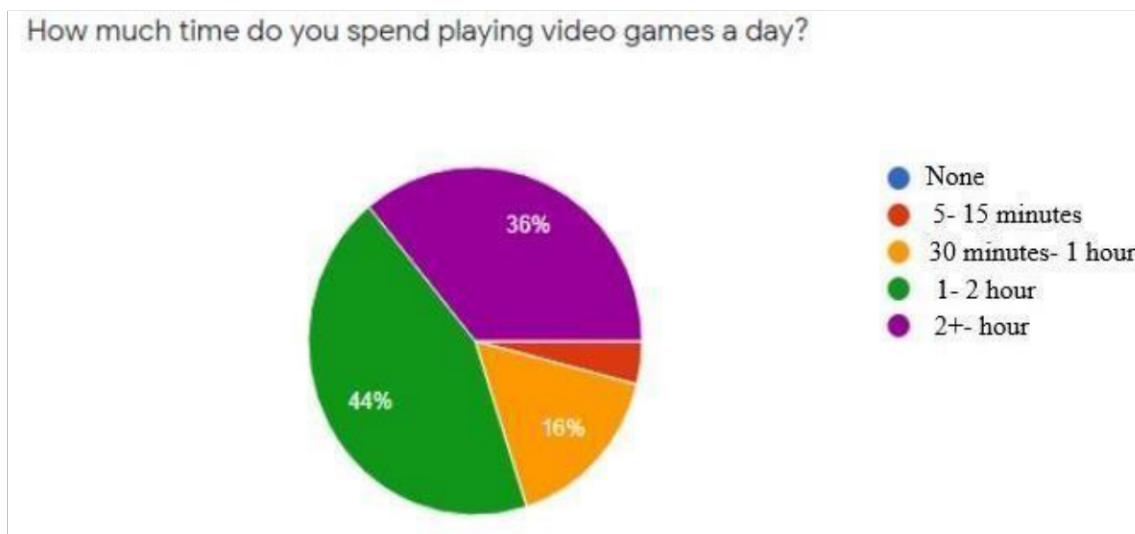


Diagram 4. Time distribution

Question 8 was about do they think video games help in learning different foreign languages, and if yes, then how so? The answers clearly show that most of the participants think that if a person has a minimal knowledge of a certain language, video games can certainly be helpful to improve.

The next question was about, what do they think, how much have video games helped to learn different languages, especially English? The answers to this question were varied, but most of them explained how it helped them.

The tenth question was about, what video games did you play that required you to use foreign languages, primarily English? Based on the answers of the participants it was clearly shown that they usually play action and adventure games alongside RPG games, only a few of them play educational, and strategy games. The titles that were mentioned the most times are the following: the S.T.A.L.K.E.R. series, the Witcher series, Call of Duty, Total War series, and online MMO games, such as League of Legends.

The next question was about *what video games would they recommend for those who want to learn foreign languages, especially in English?* For this question the participants have answered with a variety of titles such as: Stalker, League of Legends, Metro 2033, Skyrim, Total War: Rome, Fallout, Red Dead Redemption 2. From this we can assume that the majority of the answerers are knowledgeable about recent gaming titles, and are well educated in the matter. Based on their answers we can make the conclusion, that most of them would suggest adventure, and RPG games, which involve the player in an active manner.

For the final question the participants were asked which areas do they think their language skills have improved the most in the given foreign language?

As it can be seen most of the people think video games helped them develop reading skills, and speech comprehension skills. After these skills most of the people found that their listening, text comprehension have improved along with their vocabulary. Even after that, increasingly less people said that their translation and writing skills improved, and only 8 people have said that their grammar improved.

CONCLUSION

In conclusion of both chapters we can safely say that the video game industry had not grown old since the 1950-s, and is better than ever. It went from just a scientific measuring device to a full- fledged industry of multi- billion dollar companies competing over huge amounts of money. Every company tries to innovate for itself and of course other companies as well. With such technologies as the Virtual-reality headsets and the strongest computers only second to the governments super computers we can safely say that industry became the most advanced entertaining method of all time. And as humans we can only learn if we entertain ourselves in the process. According to multiple researchers this statement is true and undeniable. But not to confuse gaming for educational purposes and purely entertaining purposes. For example we can use Role-playing games as a form of teaching different languages and multi-tasking to people, but they are not that good to play for short term education. The pure educational video games such as KAHOOT! And PAX Warrior can be used to teach a variety of skills.

There are multiple arguments against the use of video games in education such as in long terms of use it can create addiction, but it was proven wrong most of the time. Other arguments state that longterm gaming can cause the loss of eyesight and brain degradation amongst other physical and mental deformities.

Based on the finding of this research we can clearly say, that video games do help develop certain skills in language learning, such as vocabulary, and reading, but if people want to learn grammar and more complex skills, which require the constant practice and understanding of said fields, than developing skills via video games are sub- optimal. Considering all we can say, that learning language skills from video games can be good, or even better than learning them in regular classes, because video games are more engaging if we choose correctly to our taste. Certainly it takes time to develop useful language skills from video games, but multiple studies show that it is much more fun.

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РЕЗЮМЕ

На закінчення обох розділів можна з впевненістю сказати, що індустрія відеоігор не старіла з 1950-х років і є кращою, ніж будь-коли. Вона перейшла від просто наукового вимірювального приладу до повноцінної галузі багатомільярдних компаній, що конкурують за величезні гроші. Кожна компанія намагається внести інновації для себе і звичайно для інших компаній. З такими технологіями, як гарнітура віртуальної реальності та найсильніші комп'ютери, що поступаються лише урядовим суперкомп'ютерам, можна сказати, що промисловість стала найдосконалішим розважальним методом усіх часів. І як люди, ми можемо навчитися лише тоді, коли розважатимемо себе в процесі. На думку багатьох дослідників, це твердження є правдивим і незаперечним. Але не плутайте ігри в навчальних цілях і чисто розважальних цілях. Наприклад, ми можемо використовувати рольові ігри як форму навчання різних мов і багатозадачність для людей, але вони не такі добрі для короткострокової освіти. Чисто навчальні відеоігри, такі як KANOOT! A PAX Warior можна використовувати для викладання різноманітних навичок. Існує безліч аргументів проти використання відеоігор в освіті, наприклад, при тривалих термінах використання це може створювати звикання. Інші аргументи стверджують, що тривала гра може спричинити втрату зору та деградацію мозку серед інших фізичних та психічних деформацій.

На основі результатів цього дослідження, ми можемо чітко сказати, що відеоігри справді допомагають розвивати певні навички вивчення мов, такі як словниковий запас та читання, але якщо люди хочуть вивчити граматику та більш складні навички, що вимагає постійної практики та розуміння згаданих сфер, ніж розвиток навичок за допомогою відеоігор є неоптимальними. Беручи до уваги все, що ми можемо сказати, що вивчення мовних навичок у відеоіграх може бути гарним, а то й краще, ніж вивчати їх на звичайних заняттях, оскільки відеоігри є більш цікавими, якщо ми вибираємо правильно на наш смак. Звичайно, потрібен час, щоб розвинути корисні мовні навички з відеоігор, але численні дослідження показують, що це набагато веселіше.

Appendix

Questionnaire

Video games and language learning

1. Gender:

Male

Female

2. Age:

12-16

16-18

18-22

22-26

26-30

30+

3. Native language:

4. Are you used to or have you played video games before (whether on a desktop computer, laptop, console, phone)?

Yes

No

5. If you are used to playing video games, in what language do you do it?

In Hungarian

In Ukrainian

In English

Other.....

6. What kind of videogames are you used to play? Action

Adventure

RPG

Simulation

Strategy

Sport

Educational

Other.....

7. How much time do you spend playing video games a day?None

5-15 minute

30 minute-1 hour

1-2 hour

2+ hour

8. Do you think video games help in learning different foreign languages, and if yes, then how so?

9. How much have video games helped you learn different languages, especially English?

10. What video games did you play that required you to use foreign languages, primarily English?

11. What video games would you recommend for those who want to learn foreign languages, especially English?

12. In which areas do you think your language skills have improved the most in the given foreign language?

Reading

Writing

Listening

Writing comprehension

Speech comprehension

Vocabulary

Translation

Grammar

Other