

VIDEO GAMES AS LANGUAGE LEARNING TOOLS

ВІДЕОІГРИ ЯК ЗАСОБИ ВИВЧЕННЯ МОВИ

Learning a language is focused around the traditional teaching process where students sit in the classroom to acquire knowledge. Basically, learning is concentrated on the teacher-student interaction. However, in the last decades, video games have been gaining popularity not only for enjoyment but also as an object of interest in academic research. However, the potential of video games for teaching has not been researched in much detail. Existing research into video games for learning has largely been based on theoretical ideas instead of looking into practical issues. Moreover, there is considerably less research into using video games as a form of language learning method. Their potential has been discussed but again, practical research is scarce.

Over the past few decades, video games have become important part of children's play and adult's leisure time. The technology has developed far enough to be compared to films and animations in their capacity to tell a fascinating story, to be well presented and directed. Video games have two important advantages over these mediums: interactivity and the form of communication. Communication is especially important in increasing the proficiency of a non-native English speaker. Playing the right games may help children to learn a lot and improve their thinking skills. According to their content, video games can be divided into: action games, adventure games, casual games, simulation games, strategy games, sport games, edutainment games.

The aim of this study is to investigate the impact of using video games on English language learners. Playing video games is a complex activity that stimulates senses, includes strategic thinking and develops motivation for learning. Gamers think, analyse and plan to achieve goals. As an education tool, video games are fun, simple, adaptive and rewarding. The use of video games serve as an alternative way of learning that permits learners to engage in dynamic activities that allow learning and enjoying at the same time, increasing motivation. As a form of highly desirable entertainment, video games provide a positive and motivating atmosphere, which is perfect for adopting a foreign language.

Key words: *computer games, video games, gamification, language learning, influence.*

З появою інформаційних технологій та винаходом комп'ютерів для людства від-

крилися нові можливості в різних сферах життя (повсякденному, науковому житті, розвагах тощо). Відеоігри не завжди слугували інструментом для вивчення мови. До 1980-х років на чорно-білому екрані не з'являлося нічого, крім декількох фігур. Однак із часом відеоігри стають дедалі складнішими, створюючи можливості для впровадження та розвитку спочатку пасивних, а потім активних мовних навичок. Відеоігри як можливість вивчення мови потрапили в центр уваги лише в останнє десятиліття.

Багато людей намагалися надати визначення відеоігор, із цих визначень зрозуміло, що відеоігри виконують безліч функцій. Згідно з дослідженням Дж. Джуула, відеоігри базуються на правилах, що забезпечують для гравців більше можливих варіантів реалізації виконання. Під час гри останні емоційно прив'язуються до неї, до самого процесу гри. Дж. Туров класифікує відеоігри на декілька груп залежно від їх функцій: «екшн»-ігри, імітаційні ігри, спортивні ігри тощо.

Самі відеоігри мають розділи введення та виходу, які фокусуються на гравці. Ігри побудовані таким чином, що правила, місії та завдання повинні бути виконані, унаслідок чого рівень задоволеності гравця грою зростає. Якщо відеоігри правильно структуровані, вони також можуть бути використані як інструмент вивчення мови, а для вчителів буде доступний новий навчальний засіб. Під час гри у студента можна розвинути декілька здібностей, зокрема соціальні та пізнавальні.

Вибірка для дослідження була обрана випадковим способом. Учасники отримали за посиланням анкету, яка складалася з 9 запитань. Перша половина запитань стосувалася загальної інформації, а наступні запитання – звичок учасників у відеоіграх. Наостанок були запитання, які вивчали навички, що використовуються у відеоіграх. Результати чітко показують, що респонденти грають у відеоігри, проте віддають перевагу такому виду відпочинку не лише для проведення вільного часу, а й для вивчення мови. Результати також показують, які популярні типи гри покращують мовні навички гравців. Ігри, у яких використовується певний рівень спілкування, мають перевагу над іншими типами ігор.

Ключові слова: *комп'ютерні ігри, відеоігри, гейміфікація, вивчення мови, вплив.*

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Introduction. With the introduction of information technology and the invention of computers, humanity paved new ways to enhance itself in different areas of social, natural and scientific fields such as entertainment, engineering and medicine. Video gaming was not always a way to acquire language. Until the mid-1980s, video games were nothing more than a bunch of shapes shooting or moving towards other shapes on a black and white screen. Due to their

lack of graphics they could not contain any narrative. Gradually, however, games have become more and more complex both in terms of gameplay and story, and as such have become phenomenal sources first for passive, but later increasingly for active language interaction. Video games in the field of learning and language learning has been in the spotlight in the past few decades. These games give an infinite access to language learning.

Methods and techniques of the research. Video games as language learning tools

First of all it is advisable to start by giving a clear definition of the term video game.

What is a video game? Based on the definition of J. Juul "a game is a rule-based system with a variable and quantifiable outcome, where different outcomes are assigned different values, the player exerts effort in order to influence the outcome, the player feels emotionally attached to the outcome, and the consequences of the activity are negotiable" [7, p. 36].

Longman Dictionary of Language Teaching and Applied Linguistics defined video games as "an organized activity that usually has the following properties: a particular task or objective, a set of rules, a competition between players, and a communication between players by spoken or written language [11, p. 89].

As we can see from the definitions, video gaming serves a range of purposes which are part of a system. This system has input and output parts and in the centre of it we can find the gamer itself. The gamer has to go through a range of steps in order to master the techniques of the game. A game itself is built up in a way to follow different rules, tasks and achievements. The outcome of the game serves as a high influential factor because the gamer gets more attached to the game to achieve a higher level of satisfactory.

Based on the study of J. Turow video games can be divided into the following genres [13]:

- action games;
- adventure games;
- casual games;
- simulation games;
- strategy games;
- sport games;
- edutainment games.

Action games are fast-paced gameplay with a focus on movement, combat, hand-eye coordination, and reaction time. The most played action games are GTA, Legend of Zelda, Batman etc.

Adventure games tell the story of its character or characters on a literal adventure. An adventure video game is usually plot-driven. This serves to focus the player on the singular task of his or her adventure. Popular adventure games are.

Casual games are fun, simple gameplay that is easy to understand. Simple user interface, operated with a mobile phone tap-and-swipe interface or a one-button mouse interface. Under casual games we think of:

- a) puzzle games – Bejewelled series;
- b) hidden object games - Mystery Case Files series;
- c) arcade games – Plants vs. Zombies;
- d) strategy games – Cake Mania series;
- e) trivia games – Bookworm Adventures series;

f) card or board games – Mah-jong.

Simulation games – a game in which participants are provided with a simulated environment in which to play. A type of digital game that presents the player with a simulation focused on a real-life scenario.

Strategy games – games that make you think. They make you use your brain thing and it hurts. There are various types of strategy games, sub-genres, such as real-time strategy and turn-based strategy. Strategy is an element that can be found in many non-strategy games, referring to any time where it requires you to think about a tactic. A game in which the players' decision-making skills have a high significance in determining the outcome, such as chess, checkers or go.

Sport games – a sports game is a video game genre that simulates the practice of sports. Most sports have been recreated with a game, including team sports, track and field, extreme sports and combat sports. Some games emphasize actually playing the sport (such as the Madden NFL series), whilst others emphasize strategy and sport management.

Edutainment games – edutainment video games (a portmanteau of Education and Entertainment) are video games that have an educational goal as part of the game's mechanics, but using an entertaining form of gameplay, sometimes using licensed video game characters. Typical Edutainment games teach the player skills such as typing, math, language, geography, and history, among others, but can also be used to develop social skills such as teamwork and sharing.

If video games are well designed and serve educational purposes, the games can be an effective tool for teachers. Number of research confirmed that video games in general have positive influence on social and cognitive development of children, including positive effect on academic achievements, cognitive abilities, motivation, attention, and concentration [6].

With the help of video games different abilities of the student are forced to be used while playing and mastering the game itself. Throughout this process players not just only play, but they also have the opportunity to acquire a language. These games stimulate senses, include strategic thinking and develop motivation for learning. Gamers think, analyze and plan to achieve goals. As an education tool, video games are enjoyable, straightforward, adaptive and gratifying.

One of the main reasons why researchers began to investigate the effectiveness of this new area is defined by Johnson. Johnson clarifies, that *a language learning game must be able to distinguish between all of the possible variability in the language to provide useful feedback* [5].

Previous studies on video gaming

Let us mention a few previous researches which deal with video games when used in the educational process.

Shaffer and Gee outlines that video games have become an inseparable part of children and adults' leisure- time activities, and that they have become their virtual world where they find themselves taking the roles of different identities and learning different skills [12]. Individuals who play these games are in reality involved in a strenuous process to solve puzzles, defeat enemies, reach new levels and reach the game's end. It is a challenge between the player and the game itself. Gee declares that learning by doing, in an entertaining fashion, is more effective than simply acquiring the facts without practicing them [4].

A recent review of the literature on this topic indicated that video gamers tended to be distracted from learning vocabularies while playing a music video game [3]. J.W. deHaan, M. Reed and K. Kuwada have tested 80 female adult undergraduates. These individuals were divided into groups of 2 where one individual played the game and the other watched it. It turned out that the individuals who kept watching the game actually managed to acquire a greater number of new words as opposed to the players, who were under a potential cognitive load while playing the game [2].

More recent evidence highlights on the effect of video games in their article "Learn English or die: The effects of digital games on interaction and willingness to communicate in a foreign language", highlight on the study conducted by de J.W. Haan et al [10]. Based on the study H. Reinders and S. Wattana concluded that "...interactivity is therefore not necessarily conducive to language acquisition" [9]. Further on the authors highlight on the fact, that language was not the key aspect within the goal of the game played, and therefore the comprehension of the vocabulary was not necessary. Moreover the genre of the game did not have a story component to it, which would require the player to be able to comprehend what was being stated and how to respond to the games challenges correctly.

H. Reinders and S. Wattana state that in order for language acquisition to be most effective, a learner must be able to produce "*comprehensible output*" in addition to getting "*comprehensible input*" of the target language [9]. This requirement describes certain video games perfectly, since most of them will provide a hefty English vocabulary and grant the player many opportunities to use that vocabulary to communicate with other players.

In his investigation gives a well-grounded hypothesis in which language learners could use video games as a way to increase their proficiency using video games. The article "Video Games as Opportunity for Informal English Language Learning: Theoretical Considerations", describes two particular types of skills that video games help cultivate: receptive skills (reading and listening) and expressive skills (writing and speaking) [1]. The way video games cultivate

receptive language skills is by giving players new vocabulary and then immediately providing them with the proper context. This is done by stimulating the player's other senses and by showing players corresponding images or having a character perform a corresponding action.

A study done by A. Piirainen-Marsh and L. Tainio investigated one potential aspect of video games as a language learning tool. The researchers watched and transcribed recordings of two teenagers playing Final Fantasy X, and they focused on how the players repeated the dialogue spoken by the in-game characters. The findings pointed out that video games are particularly flexible resources, and a socially shared experience provides extra proficiency with the players' second language [8, p. 157–179]. They argue that being able to mimic the speech characters produce in the game allows the player to transfer the words spoken into his/her own vocabulary and is later on able to use those same linguistic resources outside of a gaming situation [14].

Data collection and the questionnaire

To collect data for the study, the participants were selected random. 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. The questionnaire was divided in to 9 sections. The first two 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.

1. Age.
2. Gender.
3. Do you play or have you ever played English video games on a computer, console, web browser or mobile device?
4. If you play or have sometimes played computer games (other than educational ones), which of the following options describes your gaming the best?
5. When you play computer games, for how long do you USUALLY play on that day?
6. What type of games have you played? (Multiple choice).
7. What games have you played in which you have used or from which you have learnt English? (Open answer).
8. Has any game been, in your opinion, of specific benefit for learning English? (Open answer).

9. What skills of English language have you needed in games? (Multiple choice).

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

Of the 36 respondents who answered question one regarding respondent's gender 10 (27,8%) were male and 26 (72,2%) were female. As the results reflect more women filled out the questionnaire than men. Further on these results can serve as a basic of another study to analyze the gender distribution in more detail and showing the connection towards video games of both men and women.

Table 1

Gender distribution

| | Number | Percentage |
|--------|--------|------------|
| Male | 10 | 27,8% |
| Female | 26 | 72,2% |

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.

The following section will go through the gaming habits of the participants. The aim of this part was to see how many participants play games and the frequency of their gaming habits. Only 5,6% of all respondents claimed to have no experience in digital

games in English. The majority, 94,6% of the respondents have some form of experience with games

In question 4 the frequency of the participants' gaming sessions was surveyed. The results of playing games on a computer, game console or a handheld device were mixed, as the results show most of the participants play at least once a week or even every day. The following question was in close connection with the previous one, however in this question the duration of playing time/day was asked. The results show similarity to the gaming frequency of the participants. Those who play day by day they spend more than two hours gaming, while it is interesting that those who don't play on a daily basis they also spend more than 3-4 hours when they decide to choose this form of relaxation. There is no big difference in playing time between those who spend more than an hour – 53% or those who spend hours playing games – 47%. These numbers are in close connection and reflect on the results of the frequency of gaming habit. The frequency of their gaming habit shows that 70,6% of the participants play almost every day.

Specific games – will be illustrated based on the participants' answers. Question 6 (What type of games have you played?) is a multiple choice question, allowing the respondents to choose from the game genres listed. The participants were also asked to name specific games which were beneficial for their development in acquiring English. This question only required the name of the game. As we can see from the answers to question 6 Adventure games and Action games are the most popular type of games, but Simulation games as well as Strategy games are popular too.

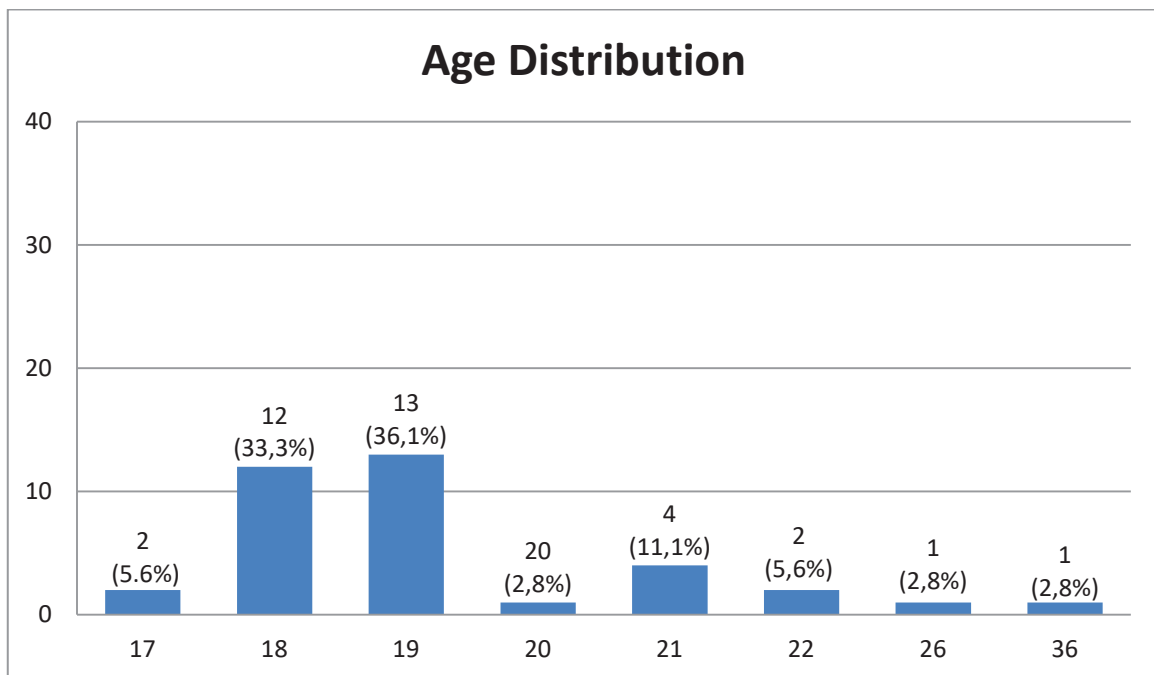


Figure 1. Age distribution

Frequency

- I play once a month or less.
- I play once a week or less.
- I play many times a week.
- I play every day or almost every day.

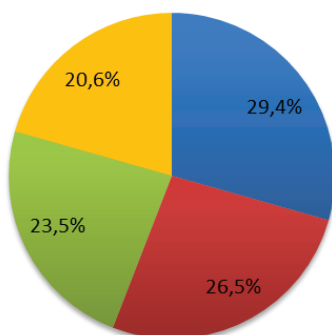


Figure 2. Frequency of gaming sessions

Playing time

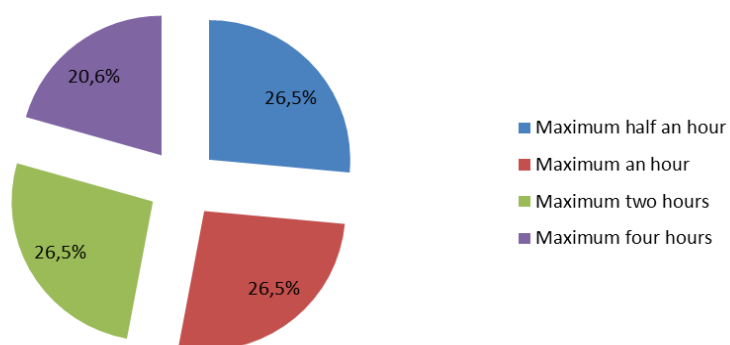


Figure 3. Playing time/day

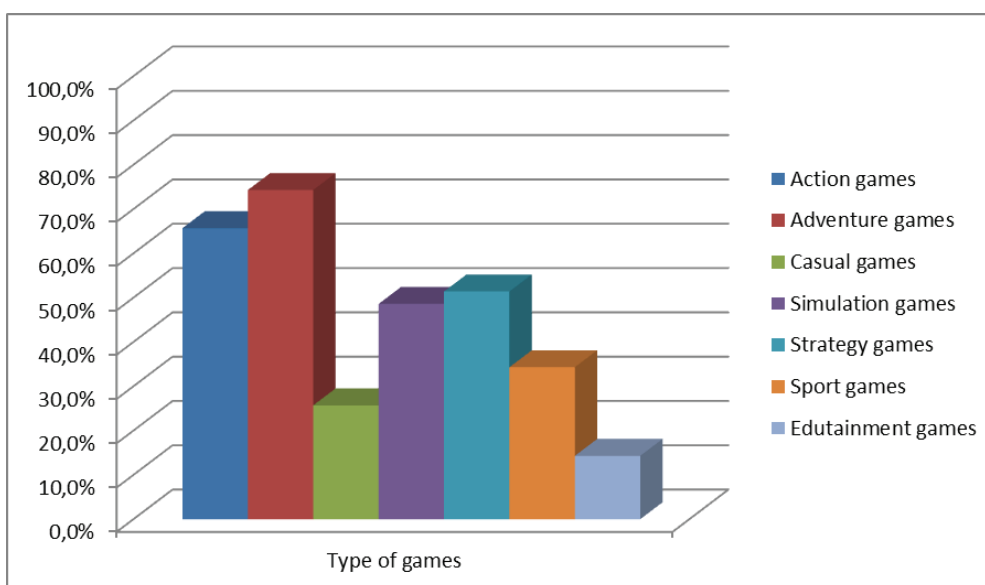


Figure 4. Type of popular games

The participants were asked to name specific games which were beneficial for the development of language skill. This question is strictly based on their personal opinion. As from the results it was clear the RPG games are very popular right next to Action-Adventure games. Classifying the games into particular genres was quite difficult because more games fall into more than one category. Since the classification is not always straightforward, in some parts it might not add additional value to the relative findings of which are the most useful games in language acquiring. Certain games were kept mentioned, these were GTA and CoD, probably the two most popular and played games worldwide. Roleplay games were not listed in the multiple choice question; however it is eye catching that how this type of game is popular among the questioners. Quiz games and puzzle games were also mentioned a number of times. If we look at the gender distinction, even though there were more female participants still the male participants gave more specific game or brand names. In all together both have shown interest in gaming, game genres and the effects of language learning with the help of games.

Question 9 asked respondents to name specific language skills that they had needed while playing video games. This question was also a multiple choice question. As the results show us the participants' reading and listening skills were mostly used while playing games. These results are probably due to the fact that most games especially action, adventure and first person games are based on dialogues,

tasks and character development were participants have to complete different achievements. These games provide not just only great sound effects but also during monologues or dialogues the subtitles can be used or be downloaded.

Table 2

Games good for language learning

| Genre | Games |
|----------------------------|---|
| Action-Adventure | GTA, Assassins Creed, Maffia II |
| Sandbox | Minecraft |
| Quiz Game | free rice, word games |
| Interactive Story Game | Maybe |
| Role-Playing Game (RPG) | Drakensang, Disco Elysium, World of Warcraft, Skyrim, Witcher, Stardew Valley |
| Edutainment games | Duolingo |
| First Person Shooter (FPS) | Call of duty |
| Puzzle Game | Homescapes |
| Sport Games | FIFA, NBA |

Discussion and conclusions. The answers to the questionnaire evidently show that English language learners prefer playing video games and this form of relaxation is beneficial for their language skill development in diverse ways. The number of participants who didn't feel so was 5,6%. A direction could be seen in the greater number of the answers leading to the fact that there is a strong

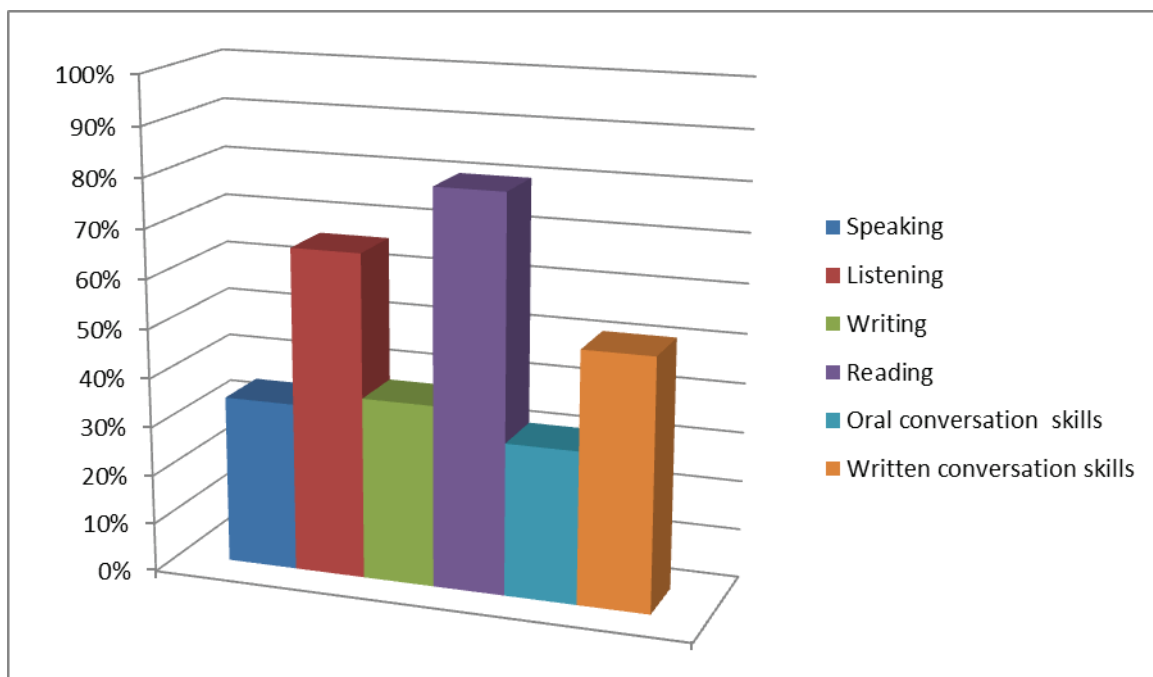


Figure 5. Aspects used while playing video games

connection in acquiring a language and playing video games. The participants' both oral and written form of communication skills were used while playing any games. The different game genres and game franchises provided by gamers show us that both action-adventure and RPG games are frequently used. The answers are quite important because these genres require different skills and develop other areas as well. In some games participants depend upon oral communication skills when communicating with their team members in order to unlock an achievement like GTA. The online version of the game allows players to communicate with each other or even use chat function. Another important genre which is very popular among males is the first shooter games. CoD is clearly the most popular today. In this type of game again communication skills are used and players can develop them. Again in this type of game players must be in connection with each other in order to pass a mission and to help each other throughout the entire game. GTA and CoD both allow the gamers to acquire a totally new vocabulary and require a level of proficiency. This form of communication gives confidence for language learners in school or outside the school.

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