

# SECONDARY SCHOOL STUDENTS' VIEWS OF VIDEO GAMES' EFFECT ON LANGUAGE LEARNING

Bachelor's thesis  
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English  
April 2018

# JYVÄSKYLÄN YLIOPISTO

Tiedekunta – Faculty Humanistis-yhteiskuntatieteellinen tiedekunta	Laitos – Department Kieli- ja viestintätieteiden laitos
Tekijä – Author Petri Autio	
Työn nimi – Title Finnish secondary school students' views of video games' effect on English language learning	
Oppiaine – Subject Englannin kieli	Työn laji – Level Kandidaatintutkielma
Aika – Month and year Huhtikuu 2018	Sivumäärä – Number of pages 27 + 8
<p>Tiivistelmä – Abstract</p> <p>Videopelien pelaaminen on yksi merkittävimmistä ajanviettotavoista ikään tai sukupuoleen katsomatta. Pelaamisen kasvu on ollut räjähdysmäistä ja sen yleisyys kasvaa jatkuvasti edelleen. Kokonaisvaltainen kielenoppiminen vaatii opeteltavan kielen käyttöä myös koulun ulkopuolella ja tähän videopelaaminen tarjoaa pelaajalle oivan alustan. Videopelaamisen linkittymistä kielenoppimiseen on tutkittu, mutta johtuen ilmiön suhteellisesta tuoreudesta ja jatkuvasta kasvusta uusien tulosten löytäminen ja linkittäminen aiheeseen on hyödyllistä.</p> <p>Tämä tutkimus pyrkii selvittämään, miten yläkouluikäiset oppilaat suhtautuvat videopelaamiseen liittyen englannin kielen oppimiseen, eli kokevatko he oppivansa englantia videopeleistä ja jos kokevat niin minkälaisia asioita he saavat siitä irti.</p> <p>Tutkimuksen aineistona käytettiin kyselyä joka pohjautuu vahvasti Erkkilän (2017) tutkimuksessaan käyttämään kyselyyn. Kysely suoritettiin eräässä Keski-Suomen yläkoulussa. Vastauksia kyselyyn tuli 207 vaikkakaan aivan jokainen vastaaja ei joko suorittanut kyselyä loppuun tai jätti vastaamatta joihinkin kysymyksiin. Kuitenkin jokaiseen kysymykseen tuli keskimäärin 180 vastausta.</p> <p>Tulokset analysoitiin kvantitatiivista analyysiä hyödyntäen ja kyselyn avokysymyksiä analysoitiin kvalitatiivisin menetelmin. Tutkimuksesta käy ilmi, että videopelaaminen on erittäin yleinen harrastus ja erilaisista asioista pitävillä löytyi oma videopeligenrensä. Yläkouluikäiset olivat ylivoimaisesti sitä mieltä, että videopelien pelaaminen on merkittävä tuki englannin kielen oppimisessa. Merkittävimmät kielenoppimisen osa-alueet, joissa vastaajat kokivat kehittyneensä pelaamalla, olivat sanavarasto ja kommunikaatiotaidot. Tutkimuksessa käy myös ilmi korrelaatio peliajan ja pelaamisen hyödyllisyyden välillä: mitä enemmän pelaa, sitä enemmän kokee saavansa pelaamisesta irti. Tuloksista käy ilmi, että videopelaaminen on kielenoppimisen kannalta hyödyllinen harrastus joka tulisi laajemmin huomioida esimerkiksi kielten opettamisen saralla.</p>	
Asiasanat – Keywords English, language learning, language proficiency, video games, input	
Säilytyspaikka – Depository JYX	
Muita tietoja – Additional information	

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# 1 INTRODUCTION

Video games are a form of pastime that has a surprisingly long history. In the very beginning during the 20<sup>th</sup> century, however, playing video games was a hobby of only a quite small group due to requiring electronic devices that were quite uncommon in those days and a certain level of expertise with these devices. In the more recent years due to advancements of both electronic devices required to play video games and the video games themselves they have become more accessible to large masses. It is really easy to turn on a modern phone and play a game or two while waiting for a bus compared to a time few decades back when gaming would require quite a difficult setup. The games themselves include many more genres than before and it is safe to say that already today there is a video game for everyone's tastes.

Playing video games has grown to become one of the most popular pastimes in Finland by far and it does not show signs of slowing down. According to ISFE consumer study (2012) 60 percent of the online population in Finland aged 16 to 64 have played a game in the past 12 months which is quite a large amount. While taking into account the fact that the audience for video games is continuously growing it is safe to say that the percentage in the ISFE's study in Finland is noticeably larger today.

However, as significant a leisure time activity as it is, not all is known about the effects video games have on the players' language skills. The topic has been studied before (for example the studies conducted by Sylvén and Sundqvist (2012) and Erkkilä (2017)) but the target groups in those studies were of different ages. Additionally as the phenomenon is continuously growing and even changing its shape in some form with for example virtual reality (VR) becoming more and more advanced and accessible, the effects it has on gaming individuals can also change or seem more pronounced making further studying both worthwhile and interesting. The present study will be focusing on the effect playing video games has on one's second language proficiency utilizing the views of Finnish secondary school students and their experiences on the subject.

## 2 BACKGROUND

This section goes through terms and definitions relevant to the present study and the background theory.

### 2.1 Defining game and play

According to Oxford dictionaries (2018) the definition of video games is as follows: *A game played by electronically manipulating images produced by a computer program on a monitor or other display.* Through the last decades there have been quite a few definitions of words *game* and *play*. However, as Erkkilä (2017: 15-18) mentions, a notable amount of those definitions are not completely fitting regarding the nature of video games nowadays. Mäyrä (2008: 52) claims that when it comes to video games the most important thing at the core level is interactivity. He explains that the games that provide us with both images and audio are also audiovisual presentations that are enjoyable because they show us something new. He then goes on to mention that each generation of video games has been visually different from the earlier ones which means that as time goes on more ambitious things are made possible due to the advancing of technology.

Caillois (1961: 9-10) defines the word *play* using the six terms that describe the nature of the activity:

- |                       |  |
|-----------------------|--|
| 1. Free:              | players are not obligated to play and if they were, playing would lose its enticing qualities as a diversion |
| 2. Separate:          | playing happens in a set area and timeframe and these are determined before that actual playing begins       |
| 3. Uncertain:         | the way how playing goes and the result of playing is not known beforehand                                   |
| 4. Unproductive:      | playing is not productive in the sense of creating something new, new meaning actual goods for example       |
| 5. Governed by rules: | playing has its own rules and those rules are the only ones that count                                       |
| 6. Make-believe:      | while playing the players are aware that the play has little or nothing to do with real life                 |

Whitton (2010: 23-27) and Juul (2011: 36-43) both also include games' make-believe and rule-based nature in their definitions on *play*. This is commonly agreed upon and, as Erkkilä (2017: 18) states, goes back and covers a timespan of half a century. Erkkilä (2017: 18) then goes on to conclude that the same is true for video games.

## 2.2 Learning from video games

As Peterson (2013: 36) mentions "education research has long emphasized the connection between play, games and learning." He later continues by introducing "Prensky's (a notable figure in furthering game-based learning) structural elements of computer games involved in learning." These include rules, goals and objectives, outcomes and feedback, conflict/competition/challenge/opposition, interaction and representation or story. It is then specified that rules provide limits and a framework that guides player behavior, goals and objectives provide motivation, outcomes and feedback elicit emotional investment, conflict/competition/challenge/opposition support problem solving and stimulate interest and involvement, interaction supports the formation of game-based social groups and representation or story enhance engagement.

Also according to Peterson (2013: 46) studies conducted recently agree that video games are motivating and that they are capable of supporting developing skills that are needed in learning. He later specifies that these skills include reading, logical thinking, observation, basic knowledge, problem solving, decision-making and strategic planning. Video games of different categories improve certain skills such as, according to Peterson (2013:46), psychomotor coordination, spatial orientation and stress reduction. The beneficial effects of playing video games therefore go beyond enhanced cognitive skills.

The way one learns language from video games is subtle, yet positive. As Gee (2005: 34) states no one would buy video games if they were able to easily learn and get to know them thoroughly. The idea is to challenge the player to learn, which keeps him or her motivated. Gee goes as far as saying that people do in fact enjoy learning even if it sometimes in schools seems otherwise. This sentence directly states that people really are looking forward to learning without really even realizing it. This is ultimately why the

learning process of also the language of video games is so subtle.

There are also other reasons why people learn from video games. One other important point Gee (2005: 35) brings up is that video games encourage the player to take risks and explore new possibilities with the ability to save the game at an earlier point. This way if the player notices that he or she made a mistake they can return to an earlier point in the game and try something different and new. However these points are not so valid if the player does not commit to staying with the game and try to advance through it. According to Gee (2005: 36), the way to achieve this is by the way of challenging the player. Gee says that the best amount of challenge is when the video game is quite hard for the player to finish yet always finishable, which keeps the player motivated to continue. Gee then compares this to a classroom by saying that some students feel that school is too easy and others that it is too hard.

Video games do not only help to learn the language but also stimulate the brain to function better, which further enhances the learning process. As Gee (2006: 2) says, in this example the video game *Thief*, the player becomes a virtual character in a very complex virtual world where the player character must be able to fulfill demanding tasks in order to proceed. When scientists study a certain phenomenon, like weather, they are not inside the simulation of the phenomenon unlike in the video game where the player is clearly inside the simulations when he or she assumes the perspective of the player character. This allows the creation of empathy of complex systems beyond the entertainment value that video games provide in which the player can learn. On a more practical level, video games can directly enhance certain cognitive functions. As Granic et. al. (2014: 67) say the first-time players of shooter games have faster and more accurate attention allocation, higher spatial resolution in visual processing and enhanced mental rotation abilities compared to a non-gamer.

### **2.3 Students and video games**

Erkkilä (2017) conducted a study where he was trying to find out about Finnish upper

secondary students' views of video games regarding language learning. Erkkilä studied a group of Finnish upper secondary students. His data gathering method of choice was a questionnaire that was answered by a total of 779 students, 16 of which were native English speakers. He divided the questionnaire into two parts: one for people who play video games and second for non-gamers. A total of 92.0 % proceeded to answer gaming related questions.

322 of the respondents stated their gaming time to be over two hours per day. Of these 322 people, 38.7 % felt like their English proficiency had come mostly from games and 44.7 % said that playing video games had been of great help in learning English.

Many big games, such as first-person shooter Counter Strike: Global Offensive (CS:GO), were some of the most played games among the respondents. Many of these games feature some sort of chat mechanic meaning some way of communication was common among them.

Erkkilä concluded that essentially all Finnish youth believes playing video games helps in learning English and those young people who play video games often receive a substantial amount of input more than other people of the same age that do not play. The effect of video games on one's language proficiency was more visible on boys than girls but that was mostly due to boys' larger playtime.

Another study was made by Sylven and Sundqvist (2012) in which the target group was Swedish 4-6-graders, of which there were 86. Methods for data gathering were a questionnaire and a language diary that was held for one week. In addition to these a custom vocabulary test was conducted. The aims were similar: to find about the effect of video games on one's language proficiency.

Many of the same big games as in Erkkilä's study (2017) came up, such as Counter Strike. Boys were more likely to play online multiplayer games (which more often than not include some sort of way to communicate with other players) than girls who preferred



single-player simulation type games.

In the results frequent gamers had the best proficiency in English, while moderate gamers came in second and non-gamers third. It can be clearly seen the informal way of learning a language clearly supports the learning that happens in school.

Even though playing video games is such a big phenomenon and still constantly growing the effects it has on individuals are not completely unanimous and agreed upon. Since language learning is in question and languages are increasingly learned outside of school, however, the topic is relevant to be studied further.

Due to the continuous increase of playing video games and a lack of studies on certain age groups the topic should be studied further. The present study is aimed towards Finnish secondary school students and will use mostly the same methodology as the studies described above, mainly utilizing the questionnaire.

### **3 THE PRESENT STUDY**

The present study aims to find out how Finnish secondary school students view video games regarding language learning.

#### **3.1 The aim of the study and research questions**

The aim of the study is to further raise awareness of the effect of video games on learning English and provide up-to-date data. The hypothesis is that playing video games has a positive impact on one's language proficiency through different ways such as having more communication tools and larger vocabulary. The research questions are as follows:

*1) How do Finnish secondary school students view video games in relation to learning English?*

The first question is for finding out what Finnish secondary school students think about video games as are they actually useful in learning English.

*2) What aspects of language do they learn or develop further by playing video games?*

The second question wants then to find out if the players of video games feel gaming is useful in language learning. Furthermore it seeks to find out what specific aspects of English do the students learn or develop in.

### **3.2 Methods of data collection and analysis**

The present study utilizes a quantitative approach consisting mostly of questions where the respondent picks one or more options, but also uses some open-ended questions. Everything is done in the form of a questionnaire. As Erkkilä (2017: 38) mentions, this way both the mass data of a large group of people and individual gamers' personal experiences through the open-ended questions can be utilized. This also allows including the gamers' own opinions through reinforcing the answers they have given earlier or possibly through explaining further.

The questionnaire itself consists of 19 questions mostly revolving around participants' personal experiences with video games. In many places the participants are also asked to reflect on the different aspects of language, such as vocabulary and oral communication skills, that they feel they have learned or enhanced by playing video games. Those who do not and have not played video games were asked questions that will reveal also their attitude towards video games and language learning and if they consider gaming actually helpful in that regard.

The group that filled the questionnaire is secondary school students. This particular age group was chosen for the present study because it is not yet thoroughly studied. The students study English as a second language and most if not all have started their English studies in the third grade. All the participants came from the same secondary school. In order to gather enough meaningful data to work with and to analyze around 200 answers

were collected. As the participants were Finnish pupils the questionnaire was in Finnish. The questionnaire was answered digitally through a web link that was provided to the teachers that were currently teaching the participants. The link was not to be forwarded and that way answers by non-target group people were greatly minimized. The teacher was supervising the answering process which further minimized the chance that the data would get corrupted due to unneeded answers.

The data was analyzed using both quantitative analysis methods and also taking the qualitative data in the way of the open-ended questions in consideration. This meant using methods such as comparing the number of answers to a certain question to the total number of answers and checking if there were any anomalies among the answers.

The data was afterwards analyzed in order to find trends and if these there found then reasons for them were considered. Then the hypothesis, that students feel that their vocabulary expanded through gaming, was compared to the conclusion.

## **4 RESULTS**

The answers to the questions will be gone through in the order that they were in the questionnaire.

In total 207 respondents began answering the questionnaire and the number of answers per question is seemingly consistent throughout the questionnaire. There are, however, certain points at which this number deviates greatly from this. As seen in Figure 1 the number of answers to questions 9, 13, 15 and 17 differs noticeably from the other questions by having substantially fewer answers. Questions 18 and 19 were directed towards non-gamers, however, they clearly had too many answers to them as many gamers answered

them as well. Figure 1 below demonstrates the variation of the amount of answers per question.

There does not seem to be a decline in the amount of answers after each page in the questionnaire as opposed to Erkkilä's study (2017) in which there was noticeable decline in answers after each page. This can be seen in Figure 1 below. In the present study the consistent number of answers per question was between 185 to 187 which is quite close to the amount that began answering the questionnaire (207), meaning 89.9 % to 90.0 % of all respondents went through all the major points in the questionnaire.

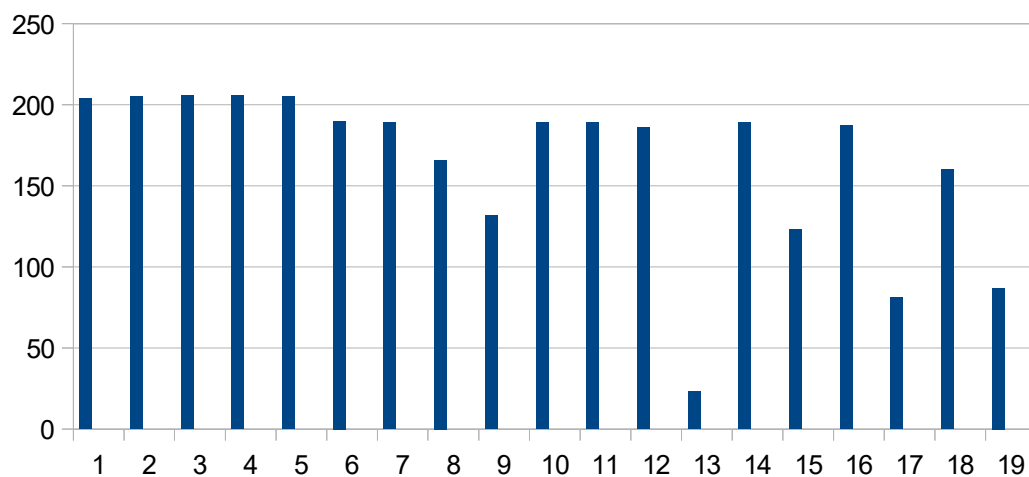


Figure 1: Number of respondents per question

#### 4.1 Respondents' backgrounds

This section will go through the details regarding respondent backgrounds.

Of the 204 respondents who answered question one regarding respondent's gender 109 (53.4 %) were male and 95 (46.6 %) were female.

Similarly to Erkkilä's study (2017) the present study focuses on non-native English

speakers which means that native speakers are not in the target group of the study. The amount of native English speakers was only 2 (1.0 %) of the 205 who answered the second question about respondent's mother tongue so it can be said that for the purposes of this study, the respondents were all Finnish.

In Finland students begin their secondary school education after sixth grade which means they are generally aged 12 to 13 at that point. Secondary school lasts three years, from grade seven to nine, after which students generally continue either to upper secondary or trade school. During this time they are aged 15 to 16. The answers in the questionnaire seemingly follow this. As seen in Figure 2 below most of the respondents were between ages 14 and 15.

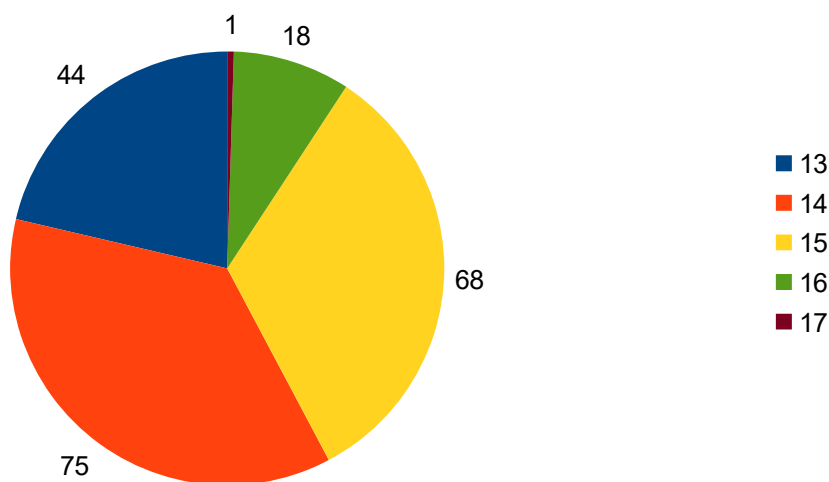


Figure 2: Age distribution among the respondents

The fourth question in the questionnaire asked the respondents' latest English grade in school. As seen in Figure 3 below there was some variation but generally the respondents' English grades are placed in the upper end of the Finnish grading system spectrum in which grade 4 is the worst and grade 10 is the best. Only one percent of the respondents had either grade 4 or 5 meanwhile more than half had one of the two highest grades 9 or 10.

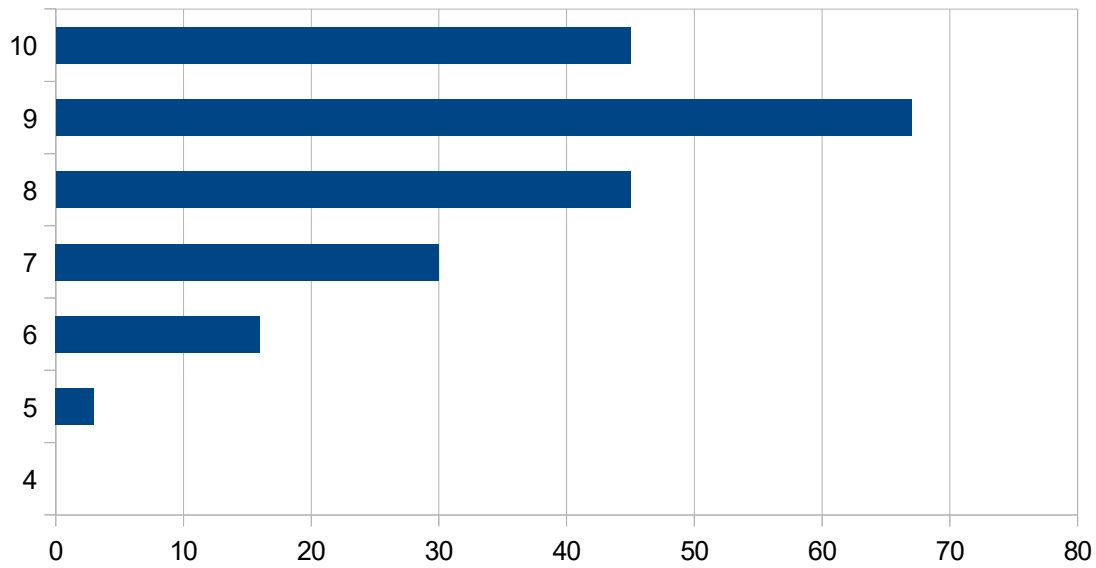


Figure 3: Distribution of the latest English grades

#### 4.2 Respondents' gaming habits

This section will go through the gaming habits section of the questionnaire. The aim here was to survey how many of the respondents play, how long do they usually play and so forth.

The amount of respondents who play or have played video games was exceptionally large. As seen in Table 1 below, of all the 205 respondents who answered question 5, which asked if the respondent plays video games and 187 (91.2 %) informed that they play or have played video games .

Table 1: Distribution of gamers and non-gamers among respondents

	Number	Percentage
Gamers	187	91.2
Non-gamers	18	8.8

Question 6 asked the respondents about the frequency of their gaming. If the respondents

were not playing video games anymore they were asked to choose the option which best reflected the time they still played. The spread among the answers in this question was quite wide. As seen in Figure 4 below, however, more than a third (68 of 190 answers, 35.8 %) of the respondents played every day or almost every day.

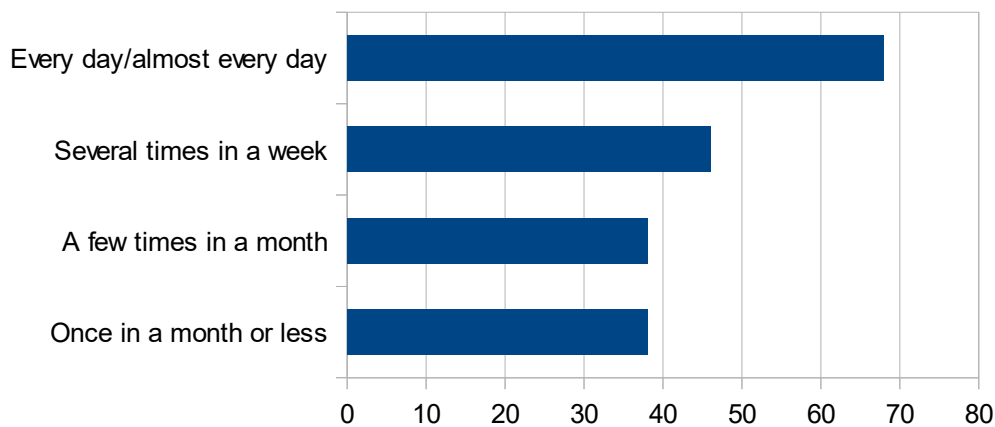


Figure 4: Frequency of gaming among the respondents

In question 7 the duration of the respondents' gaming sessions was surveyed. Once again, as seen in Figure 5 below, the spread among the respondents was quite wide with the option "1-2 hours" being most common with 48 of the 189 answers (25.4 %). Most of the respondents played a notable amount: a one hour or more.

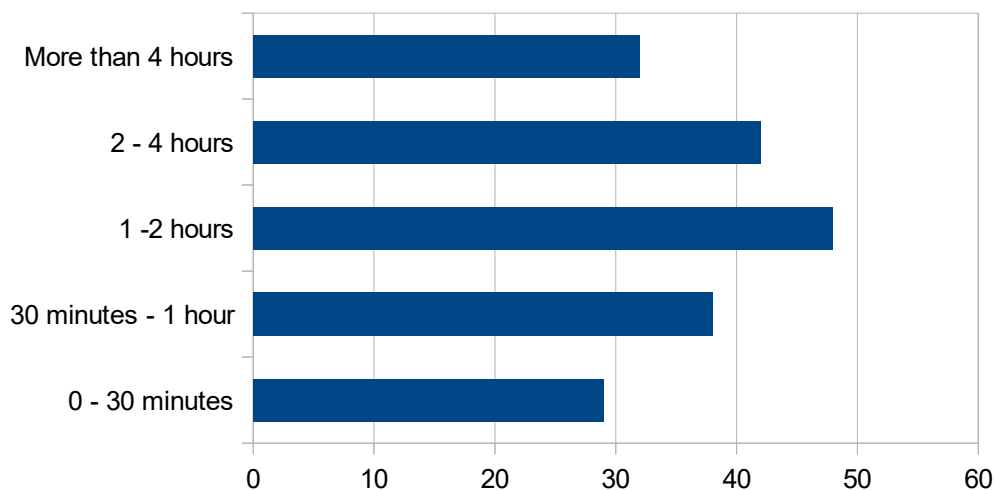


Figure 5: Duration of the gaming sessions among the respondents

### 4.3 Specific games, game genres and their usefulness in learning English

In this section of the questionnaire in which respondents were asked to share the games they most often play will be gone through and then their effectiveness regarding learning English based on respondents' personal experiences will be analyzed.

Question 8 asked the respondents what games have played in which they had either used or learned English. The lengths of the responses varied greatly, ranging from mentioning just a single game to quite long ones listing more than ten specific games. Since the list of all these games mentioned was so large it was not useful to list it all here as is. However, certain games and genres were mentioned several times. They have been listed below in Table 2.

Table 2: Most commonly played games among respondents

Genre	Games
Survival	Fortnite, PlayerUnknown's Battlegrounds (PUBG)
First person shooter (FPS)	Counter Strike: Global Offensive (CS:GO), Call of Duty-series (CoD), Battlefield-series (BF), Rainbow Six: Siege (R6: Siege), Overwatch
Sandbox	Minecraft, Growtopia
Multiplayer online battle arena (MOBA)	League of Legends (LoL)
Massively Multiplayer Online Role-playing Game (MMORPG)	Star Stable Online, RuneScape, World of Warcraft (WoW)
Sports	FIFA-series, NHL-series
Action-adventure	Grand Theft Auto V (GTA V)

When asked which games had been particularly good in learning English in question 9, the list of games mentioned shrank noticeably in size leaving only part of the games mentioned in the previous question. It should be noted, however, that in this question there were many answers that could not specify any single game.



*"Ei oikeestaan. Kaikki pelit joissa voi puhua ihmisten kanssa."* (Respondent)

"Not really. All games in which one can talk with people."

*"CS:GO koska siinä pitää kommunikoida timin kanssa"* (Respondent)

"CS:GO because in that game you have to communicate with team"

*"Gtav oli tosi hyvä enku oppimises"* (Respondent)

"GTA V was really good in learning English"

The examples above in italics are direct quotes from respondents that are translated by me. They are examples that give a good general view of the answers given in this section. The respondents put a clear emphasis on the games, such as CS:GO in the second example answer above, that include or even require communication between players. The example above at the top mentioned that all games which include talking with other people are really helpful in learning English. There were some exceptions, such as the open world game GTA V, which in turn contains much different kinds of language. These games are listed in Table 3 below.

Table 3: Particularly good games for learning English

Genre	Games
Survival	Fortnite, PlayerUnknown's Battlegrounds (PUBG)
First person shooter (FPS)	Counter Strike: Global Offensive (CS:GO), Call of Duty-series (CoD)
Sandbox	Minecraft
Multiplayer online battle arena (MOBA)	League of Legends (LoL)
Massively Multiplayer Online Role-playing Game (MMORPG)	Star Stable Online, RuneScape, World of Warcraft (WoW)
Sports	Fifa-series, Nhl-series
Action-adventure	Grand Theft Auto V (GTA V)

Question 10 asked respondents to name specific language skills that they had needed while playing video games. A few options were already provided in the question but respondents could also add skills they had needed that were not already in the options. Respondents could pick several options. As seen in Figure 6 below of the 189 respondents who answered this question 159 (84.1 %) picked reading comprehension. Six (3.2 %) respondents picked the option "something else". Those two options had the most and the least answers respectively. However, they did not specify what other skills they had needed to use.

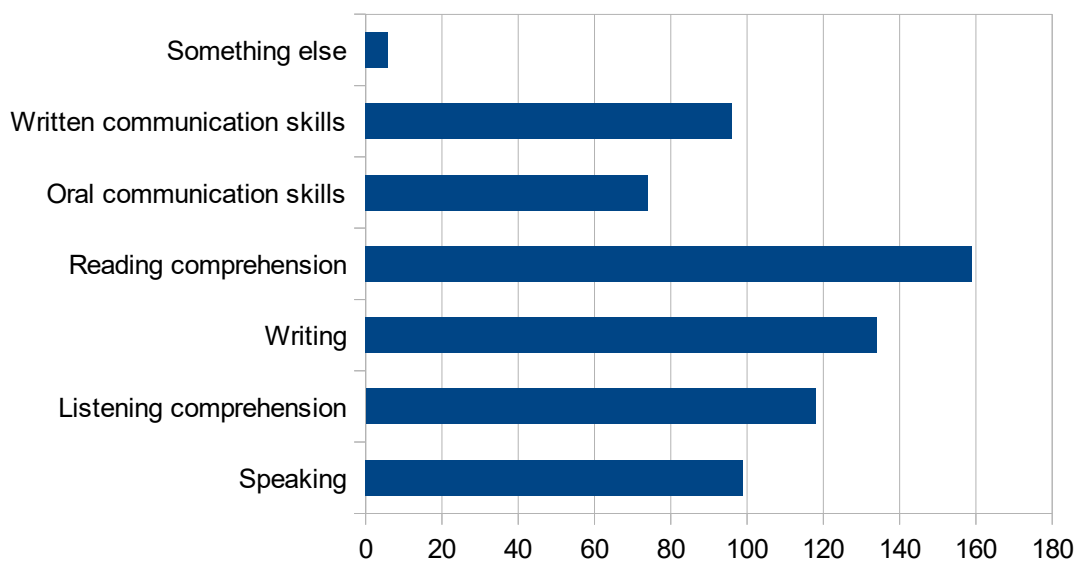


Figure 6: Skills related to English that respondents had needed while playing

In question 11 respondents were asked how useful they felt playing video games had been in learning English. As seen in Figure 7 below, the results were absolutely one-sided with 176 of 189 (93.1 %) respondents feeling video games had been helpful in learning English at least to some degree.

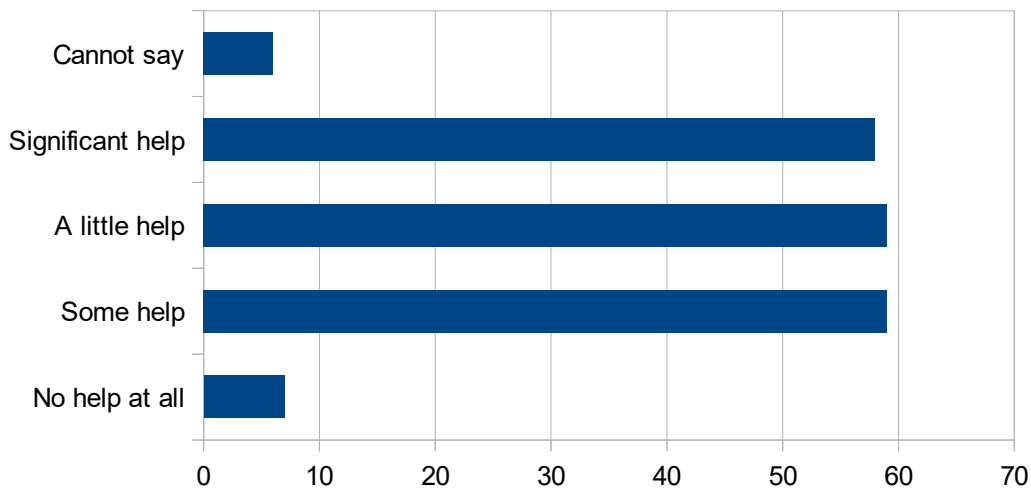


Figure 7: Usefulness of playing video games in learning English

In question 12 the respondents were asked to specify what aspects of English language they felt they had learned while playing video games. This was another question in which the respondents were allowed to pick several options and if something was not listed, they were able to add to the options provided. As seen in Figure 8 below, of all the options, one stood above all else: vocabulary with 171 of 186 (91.9 %) respondents picking the option. Another notable option was reading with 112 of 186 (60.2 %). Two of 186 (1.1 %) respondents picked the "something else" option. They did not, however, specify what it was they had learnt.

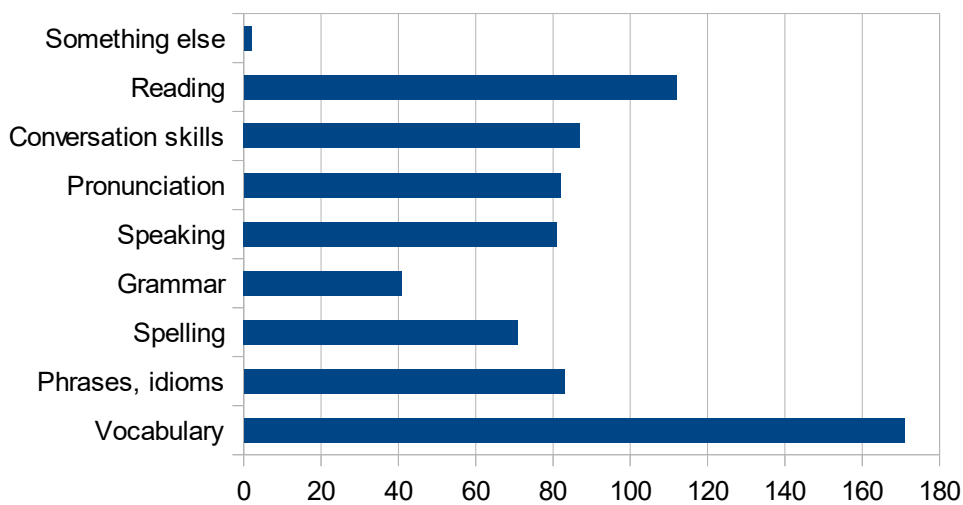


Figure 8: Specific aspects of English language learned while playing video games

Question 13 provided the respondents with a chance to add or specify further what aspects of language they had learned by playing video games. 23 respondents answered this question.

*"Olen muiden kanssa pelatessa oppinut paljon puhumista ja sen sellaista, ne taidot harvemmin kehittyvät liian paljoa yksin pelatessa."* (Respondent)

"I have learned a lot about speaking and things like that while playing with others, those skills seldom develop while playing alone"

*"Tavaroitten nimiä"* (Respondent)

"Names of items"

The respondents generally emphasized the development of communicational skills and expansion of vocabulary as being the aspects of English they felt had advanced while playing video games. Some aspects of the language were learned while playing alone while some when playing with others. The first example answer above said that playing with others helps in developing communicational skills while the second example answer specified that getting to know names of certain items was something that had developed while gaming.

#### **4.4 Usefulness of playing video games in and out of school**

Question 14 asked the respondents about the usefulness of playing video games regarding their English studies. As seen in Figure 9 below, these answers were largely one-sided once again with only 12 out of 189 (6.4 %) respondents stating that playing video games has been of no use in their English studies.

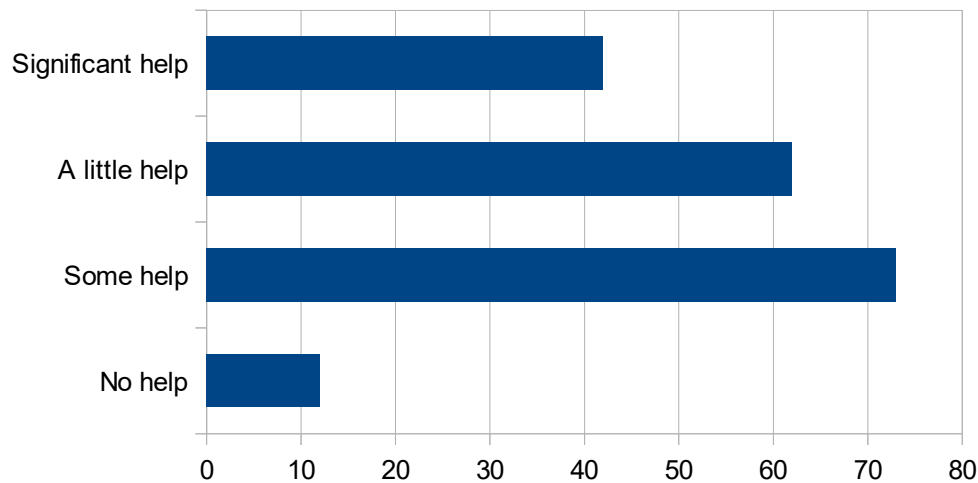


Figure 9: Usefulness of playing video games in own English studies

In question 15 the respondents were then asked to specify how playing video games has helped them in their English studies. 123 answered this question.

*"Esim. sanoja tulee paljonkin vastaan monissa peleissä, joten sanakokeet ovat helpompia, sillä osa sanoista on jo valmiiksi tuttuja"* (Respondent)

"For example one comes across a large amount of words in many games and so vocabulary exams are easier since a part of the words are already familiar."

*"Joo koska pitää yleensä kommunikoida eri maalaisten ihmisten kanssa"* (Respondent)

"Yeah because one usually has to communicate with people from foreign countries."

The answers were generally similar to the ones given in question 13 emphasis being on vocabulary and communicational skills. It was generally felt that playing video games gave the respondent more tools to face the challenges the school's English lessons pose. The first example answer above specified that vocabulary examinations became easier through playing while the second example mentioned that it was easier to practice communication with foreign people.

The respondents were asked to tell if the English skills they learned while playing video games had been helpful to them outside of school in question 16. As seen in Figure 10 below vast majority felt so as only 10 out of 187 (5.4 %) did not feel English skills gained by playing video games were useful outside of school.

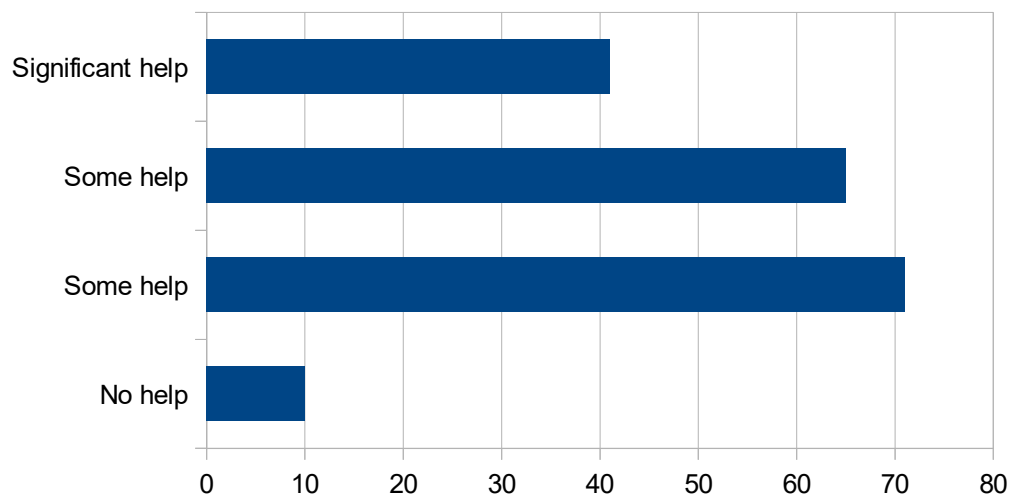


Figure 10: Usefulness of playing video games outside of school

In question 17 respondents told in what ways the English they had learned while playing video games had been utilized outside of school. 81 answers were given to this question.

*"Ulkomailla kun on pitänyt puhua jollekin"* (Respondent)

"Abroad when I had to speak to someone."

*"En osaisi läheskään niin hyvin englantia jos en pelaisi."* (Respondent)

"My English skills would not be nearly as good if I did not play."

Many respondents provided extensive answers to this question. Strong emphasis was on the communication both in real life and on the internet. The English learnt from playing video games seemingly gave the respondents confidence in speaking the language even outside of school and contributed to the felt richness of their language usage. The first example above mentioned that the English learned while playing video games made it

easier to speak to someone while being abroad. The second example mentioned that the respondent's English skills would be nowhere close to where they are now if they had not played video games.

Questions 18 and 19 were to be answered by non-gamers. However, they received far more answers than there were non-gamers (around 160 each) despite the line above the questions saying that they were directed towards the non-gamers. In addition to that the platform used in creating the questionnaire proved to be extremely troublesome in filtering singular answers. Therefore the answers to these questions are not considered eligible in this study. It should be noted, however, that the answers to these two questions followed a similar trend as the earlier ones in that the vast majority considered playing video games to be useful in learning English.

## 5 DISCUSSION

As the answers to the questionnaire clearly show in the above sections, Finnish secondary school students overwhelmingly feel that playing video games is of great help in learning English language in various different ways. The amount of participants that did not feel so hovered around 5.0 % of all answers.

A clear trend was seen in the vast majority of the answers regarding learning language through playing as strong emphasis on expanding vocabulary and the development of communicational skills was easily seen. The different game genres the respondents played the games from may have impacted the answers. Some games, as the vastly popular CS:GO, require a great deal of communication among the teammembers if they were to emerge victorious. For this CS:GO provides different options: written communication through chat and oral communication through voice chat. The language used in games such as this is usually English due to it often being the language most players are capable of communicating in at least to some degree. Meanwhile ,games such as GTA V located in a large, open gameworld contain a whole lot of words that the players inevitably come across while playing. These two examples show that various games from different game

genres can often require proficiency in different aspects of language from the player.

Another interesting finding was that playing video games and learning English through them seemingly gives the respondents confidence in different situations where English is needed both in and outside of school. One reason for this could be that as the respondents practice communication in English almost every day, as seen in answers to question 6, they need to think less about it as it comes more naturally to them as opposed to the respondents whose English learning is mainly limited to school work. Also, as one's vocabulary expands, one has more tools and ways to express him- or herself which also streamlines the communication.

Also, as seen in Table 4 below, the respondents were largely above average students regarding their latest English grades with over half (54.4 %) being either 9 (very good) or 10 (excellent), which could make them more able to analyze their own gaming and English learning related to it. It is also notable that being such great students in English overall they felt playing video games meaningfully helped them to accumulate some of that knowledge and therefore further aides them in acquiring better grades.

Table 4: Respondents' last English grades

Question	Answers	Mean	Median	Standard deviation
Last English grade	206	8,34	9	1.27

### 5.1 Correlation between video game based language learning and playing time

As seen in Erkkilä's (2017: 86) study, there was clear a correlation between gamers' playing time and language learning and he notes the young players who play more often than their peers receive a noticeable bonus to their English input.

As can be seen in Table 5 below, the present results were somewhat similar to the ones Erkkilä (2017: 86) had in his study. Gamers who play more feel that they have learned



more English through playing video games. Therefore it can be said that playing video games is beneficial regarding learning English.

Table 5: Correlation between learning language by playing video games and playing time

		<b>6. Frequency of play</b>	<b>7. Duration of play</b>	<b>11. Learning English by playing video games</b>
<b>6. Frequency of play</b>	<b>Pearson Correlation</b>	1	0.66**	0.46**
	<b>Sig. (2-tailed)</b>		0.00	0.00
	<b>N</b>	190	190	190
<b>7. Duration of play</b>	<b>Pearson Correlation</b>	0.66**	1	0.43**
	<b>Sig. (2-tailed)</b>	0.00		0.00
	<b>N</b>	189	189	189
<b>11. Learning English by playing video games</b>	<b>Pearson Correlation</b>	0.46**	0.43**	1
	<b>Sig. (2-tailed)</b>	0.00	0.00	
	<b>N</b>	189	189	189

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## 6 CONCLUSION

The present study has investigated Finnish secondary school students' views of video games' effect on English language learning. It studied whether playing video games is useful regarding one's English language learning and if it is, in what ways is it beneficial. It has also studied secondary school students' gaming habits and what games the students typically play. The data was collected through an online questionnaire which was very heavily based on the one Erkkilä (2017) used in his study.

The vast majority of the respondents felt that playing video games was useful in learning English. Also it helped them both in and out of school situations in which using English was required. The main aspects of language that the respondents' felt had developed while gaming were vocabulary and various communication skills.

The results of this study support the findings of the ones done earlier. Studies such as those carried out by Sylvén and Sundqvist (2012) (4-6 graders) and Erkkilä (2017) (upper secondary students) had really similar findings and all support the finding that those who play more video games receive more English input and so learn more English.

The possible flaws in the study include wording in the questionnaire. This is due to some questions including words such as some, a little and significant in some of them. This may have caused some difficulty and confusion among the respondents as the distinction between the different words may not always have been clear, possibly resulting in some answers that do not perfectly indicate the real experience of the respondent.

As a summary, however, the study gives great proof that in Finnish secondary school students' view playing video games is indeed helpful in learning English and indisputably shows that there is clear correlation between one's playtime and the usefulness of the gaming. Thus certain possibilities arise regarding further study. As Erkkilä (2017: 88-89) mentions it would be useful to conduct a study in which it was researched how digital gaming affects the language learning of the elderly people. Another interesting topic that could be studied further is how the beneficial effect gaming has on one's language learning could be maximized so that gaming could yield the greatest benefits possible. Both of these topics, however, would require extensive experimental study and several researchers to be feasible.

Due to the ever advancing nature of technology and video games, the topic should be steadily studied more to have as up-to-date data information available as possible. Additionally, due to how video games change their shape and form the topic will stay interesting to study. If all this knowledge could then be utilized in teaching English in schools, students' language learning capabilities could be potentially enhanced much further. This does pose a problem, however, as one of the main features of video games is being free in nature meaning that getting similar results in school could prove challenging.

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# APPENDICES

## The questionnaire

### **Kandidaatin tutkielma: miten videopelit näkyvät englannin kielen osaamisessa ja onko niistä hyötyä?**

Kyselyn tarkoituksena on selvittää yläkouluikäisten videopelitottumuksia, niiden linkittymistä englanninkieleen ja mitä mieltä oppilaat ovat videopeleistä kielten oppimisen välineenä. Kysely on osa kandidaatintutkielmaa, joka tehdään Jyväskylän yliopiston kieli- ja viestintätieteiden laitoksella. Tutkimuksen tekijän yhteystiedot löytyvät lopusta.

Kyselyyn vastataan täysin anonyymisti, vastaaja ei sitoudu mihinkään, eikä vastaajalta kysytä mitään tietoja joista hänet voitaisiin tunnistaa.

Kyselyyn on tarkoitus vastata aivan rehellisesti, eikä siinä olekaan oikeita ja väärä vastauksia. Vastaathan kaikkiin kysymyksiin.

Kiitos vastauksistasi!

#### **1. Sukupuoli**

Mies

Nainen

#### **2. Onko englanti äidinkielenäsi?**

kyllä

ei

#### **3. Ikä**

11

12

13

14

15

16

17

**4. Viimeisin englanninnumerosi todistuksessa (asteikko 4-10, jos olet saanut muulla tavallailmaistun arvosanan niin kirjoita se)**

4

5

6

7

8

9

10

Muu, mikä

---

**5. Pelaatko tai oletko joskus pelannut englanninkielisiä tietokone-, konsoli-, mobiilitaiselainpelejä? (jatkossa tässä kyselyssä niitä kutsutaan yhteisesti videopeleiksi)**

kyllä

ei

Mikäli et pelaa etkä ole aiemminkaan videopelejä pelannut, siirry kysymykseen 18.

**6. Mikäli pelaat tai olet pelannut muita kuin opetuskäyttöön tarkoitettuja englanninkielisiä videopelejä, mikä seuraavista kuvaa sinua parhaiten? (myös mobiilipelit) (jos et pelaa enääniin valitse se, joka parhaiten kuvaa aikaa jolloin**

**pelasit)**

Pelaan kerran kuukaudessa tai harvemmin

Pelaan muutamia kertoja kuukaudessa

Pelaan useampia kertoja viikossa

Pelaan joka päivä/lähes joka päivä

**7. Kun pelaat videopelejä, kuinka kauan TYYPILLISESTI pelaat?**

0-30 minuuttia

30 minuuttia - 1 tunti

1-2 tuntia

2-4 tuntia

yli 4 tuntia

**8. Mitä sellaisia pelejä olet pelannut, joissa olet käyttänyt tai joista olet oppinut englantia?**

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**9. Onko jokin pelaamasi peli ollut erityisen hyvä väline englannin oppimisessa? Nimeä se/ne tässä**

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**10. Mitä englannin kieleen liittyviä taitoja olet pelatessasi tarvinnut? Valitse yksi tai useampi**

Puhuminen

Kuullunymmärtäminen

Kirjoittamisen

Luetunymmärtäminen

Suulliset keskustelutaidot

Kirjalliset keskustelutaidot

Jotain muuta, mitä?

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### **11. Kuinka paljon hyötyä pelaamisesta on ollut englannin kielen oppimisessa**

Ei lainkaan hyötyä

Jonkin verran hyötyä

Melko paljon hyötyä

Paljon hyötyä

En osaa sanoa

### **12. Millaisia asioita olet mielestäsi oppinut pelaamalla videopelejä englannin kielellä?**

Sanat

Fraasit, sanonnat

Oikeinkirjoitus

Kielioppiaasiat

Puhuminen

Ääntäminen

Keskustelutaidot

Lukeminen

Jokin muu, mikä?

---

**13. Tähän voit halutessasi lisätä tai täsmentää, mitä kielellisiä asioita olet oppinut pelaamalla**

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**14. Kuinka paljon videopeleistä oppimallasi kielitaidosta on ollut hyötyä englannin kielen opinnoissasi koulussa?**

Ei lainkaan

Hieman

Jonkin verran

Paljon



**15. Auttaako pelaaminen mielestäsi englannin opiskelussa koulussa? Jos kyllä, niin miten?**

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**16. Kuinka paljon videopeleistä oppimallasi englannin kielitaidosta on ollut hyötyä koulun ulkopuolella?**

Ei lainkaan

Hieman

Jonkin verran

Paljon

**17. Mikäli koet videopeleistä oppimasi englannin hyödyttäneen sinua koulun ulkopuolella, niin millaista hyötyä ja millaisissa tilanteissa?**

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Ne jotka eivät pelaa, vastatkaa näihin

**18. Kuinka paljon uskot videopelaamisen hyödyttävän englannin kielen oppimista?**

Ei lainkaan

Hieman

Jonkin verran

Paljon

**19. Jos uskot videopelaamisen hyödyttävän englannin kielen opiskelussa, niin kerro mitä taitoja uskot pelaajien oppivan tai missä taidoissa uskot heidän kehittyvän**

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Kiitos vastauksistasi! Mikäli sinulla on jotain tiedusteltavaa kyselyyn liittyen, ota yhteyttä sähköpostitse osoitteeseen [petri.e.d.autio@student.jyu.fi](mailto:petri.e.d.autio@student.jyu.fi).

Terveisin  
Petri Autio

### **The questions in English**

Question 1: Gender

Question 2: Is English your mother tongue?

Question 3: Age

Question 4: Last English grade?

Question 5: Do you play or have you played computer, console, mobile or browser games in English?

Question 6: If you play or have played video games created for other than teaching purposes which of the following describes you best?

Question 7: When you play video games how long do you typically play for?

Question 8: What games have you played in which you have used or learned English from?

Question 9: Has any game in particular been an especially good tool in learning English? Name them.

Question 10: What skills related to English have you needed while playing? Choose one or more

Question 11: How useful has playing been in learning English?

Question 12: What kinds of things have you learned while playing video games in English?

Question 13: Here you can add or clarify what linguistic things have you learned by playing

Question 14: How useful have the language skills that you have learned while playing been in your English studies?

Question 15: In your opinion does playing help in studying English at school? If yes then how?

Question 16: How useful have the language skills that you have learned while playing been outside of school?

Question 17: If you feel like the language skills learned from video games have been useful to you outside of school then how have they been useful and in what kind of situations?

### **Questions for non-gamers**

Question 18: How much do you think playing video games helps in learning English?

Question 19: If you think playing video games helps in learning English then tell what skills you believe the gamers learn or in what skills you think they develop in