THE GAMES PEOPLE PLAY

Learners' perceptions of vocabulary acquisition via playing video games

Bachelor's Thesis

Taija Teittinen

JYVÄSKYLÄN YLIOPISTO

Tiedekunta – Faculty	Laitos – Department
Humanistinen tiedekunta	Kielten laitos

Tekijä – Author
Taija Teittinen

Työn nimi – Title
The games people play – learners' perceptions of vocabulary acquisition via playing video games

Oppiaine – Subject	Työn laji – Level
Englanti	Kandidaatintutkielma

Aika – Month and year	Sivumäärä – Number of pages
Tammikuu 2015	27

Tiivistelmä – Abstract

Tämä tutkielma käsittelee oppilaiden kokemuksia sanaston omaksumisesta videopelaamisen kautta. Taustateoriaosiossa tutustutaan videopelaamisen kehitykseen, pelien genreihin, videopelaamiseen harrastuksena sekä Suomessa että muualla Euroopassa, kielen ja sanaston omaksumiseen ja oppimiseen sekä lopuksi pelaamisen hyötyihin. Aineistonkeräys pelaamistottumuksista sekä pelaamisen kautta omaksutusta sanastosta suoritettiin kyselyn avulla 13 kahdeksasluokkalaiselta oppilaalta. Saatu aineisto analysoitiin teoriasidonnaisesti ja aineistolähtöisesti.

Useat tutkimukset ovat todenneet sanaston olevan yksi kielen osa-alueita, joita videopelien kautta opitaan. Siitä, millaista sanastoa videopelit opettavat, ei tutkimustietoa kuitenkaan juuri ole. Tässä tutkimuksessa havaittiin, että oppilaat kokivat omaksuneensa videopelien kautta ensisijaisesti substantiiveja ja verbejä. Ryhmän keskuudessa pelatuimmiksi genreiksi, joiden kautta sanastoa opittiin, nousivat toiminta- ja mobiilipelit. Miespuoliset osallistujat tunsivat omaksuneensa pelaamisen kautta merkittävämmän määrän sanastoa kuin naispuoliset osallistujat. Kaikki osallistujat kokivat oppineensa sanastoa videopelaamisen kautta, ja 12 osallistujaa koki pelaamisen kautta omaksutun sanaston vaikuttaneen positiivisesti englannin kielen kouluarvosanaan. Johtuen otoksen samankaltaisista englannin arvosanoista yhteyttä korkean englannin kielen arvosanan ja koetun pelaamisen kautta omaksutun sanaston välillä ei kuitenkaan voitu todeta.

Tutkimuksessa todetaan videopelaamisen vaikuttavan sanastonoppimiseen ja sen kautta englannin kielen arvosanaan. Tutkimustulos ei kuitenkaan ole laajalti yleistettävissä pienen otoskoon vuoksi.

Asiasanat – Keyword Vocabulary acquisition, video games

Säilytyspaikka – Depository JYX

TABLE OF CONTENTS

1 INTRODUCTION

In the last few decades, video games have become a part of millions of people's everyday lives. In 2012, 48% of Europeans alone had played video games in the past 12 months (Video gamers in Europe 2012: 6), and it seems that the number of people playing video games keeps increasing. Video games are constantly present in the media, which is only natural since playing them is a popular pastime. Nowadays video games can be accessed through a computer, a console, or even a mobile device, which many of us carry along at all times. Playing video games has became a major field of entertainment and, therefore, a multi-billion business with staggering game and marketing budgets, enormous press conferences, competitions with multi-million dollar prizes, and professional gamers.

Due to video games being a part of our everyday lives, video game research has been increasing its popularity as well. It has been found that playing video games are beneficial to decision-making skills and visual short term memory (Boot et al. 2008: 395). Lately, video games have also been linked to linguistic research, such as discourse analysis. In addition, the connection between language learning and video games has become a fairly popular research subject. Sundqvist (2009) studied extramural activities' effect on language learning and found that playing video games has a positive effect on language development and vocabulary test scores. Furthermore, Uusikoski (2011) found that playing video games had a positive effect on upper secondary school students' English grades. These studies have also found that vocabulary is one of the aspects of language that develops the most through playing video games, but little to no research has been conducted on what kind of vocabulary is learned via playing video games.

The present study aims at discovering what kind of vocabulary is acquired via playing video games and through what kinds of games vocabulary is acquired by focusing on 8th grade pupils' perceptions and personal experiences of acquiring new words through playing video games. In addition, it focuses on revealing to what extent the participants feel they have acquired new vocabulary via playing video games and whether they feel it has positively affected their English grades. The secondary goals of the present study are to discover if there is a connection between the experience of notable vocabulary acquisition through playing video games and achieving good grades in English, how the frequency of playing video games affects the experienced level of

vocabulary acquisition, and the gender differences of these aspects.

2 VIDEO GAMES AND LANGUAGE LEARNING

2.1 Video games

The subject of which game should officially be called the first video game still arouses debate, but 'Tennis for Two' can be considered as the first actual video game. Even though it was introduced as early as 1958 (The first video game? n.d.), the field of video game research is still somewhat new. Most of the research considering both playing video games and the English language has been done on the language use in gaming situations and, thus, discourse analyses of such situations can be found rather easily. An example of such research is *Language policy in the making: an analysis of bilingual gaming activities* (Leppänen and Piirainen-Marsh 2009). Discourse analyses on gaming situations can also contain notions beneficial to research on vocabulary learning through playing video games.

Video games can be categorized into numerous types and genres or, more specifically, modes in which the game is experienced (Apperley 2006: 10). Chou and Tsai (2007: 819) divide video games into eight types: role-play, strategy, action, sports, puzzle, first-person action, adventure and simulation. Factors that affect the division into a type and a genre are space, number and proximity of players, and the game's setting (Apperley 2006: 10-11). Space and the player's ability to move in the game milieu define whether the game is linear or free, whereas number and proximity of players define whether the game mode is singleplayer or multiplayer. The game's setting, meaning both the visual setting and the atmosphere of the game, determines whether the game can be categorized as, for instance, horror or fantasy, or if it is, for example, a pinball game. A game can, however, be categorized as an action game even if the setting contained horror-like features. Categorizing video games into genres is a complex process since the games often contain features of more than one type and genre of a game and because the genres often overlap.

The development of the Internet has had a substantial effect on the development of video games, especially on the development of playing video games as a common leisure time activity. Due to

high speed internet connections and broad availability, purchasing and playing video games online is now a part of peoples' everyday lives. The development of the Internet has also had a great impact on the social aspect of playing video games. In addition to written chat options, the Voice over Internet Protocols (VoIP) enables real-time voice chat while playing a video game. Moreover, game programming of today allows to create realistic and interactive game experiences. The development of technology enables playing games on various platforms, including consoles, computers, tablets and mobile phones, which helps to bring video games close to everyone with a compatible appliance.

According to Interactive Software Federation of Europe (ISFE), in 2012 60% of Finnish people and 48% of all Europeans have played video games in the past 12 months (Video gamers in Europe 2012: 6). The ISFE study consisted of approximately 15 000 interviews conducted in 16 European countries. Playing video games has significantly increased in the past years: in 2010, only 25.4% of Europeans had played video games in the past 12 months, which means a 22.6 percentage point increase in playing video games. From 2009 to 2011, playing digital games, which includes digital entertainment games, gambling and educational games, has significantly increased in Finland (Karvinen and Mäyrä 2011: 22). 79% of Finns play digital games and 56% of Finns play digital games on a regular basis, at least once a month.

2.2 Second / foreign language acquisition and learning

Johnson (2008: 78-81) defines language acquisition as the process by which individuals subconsciously learn a language through exposure to it, and language learning as its conscious counterpart process that usually takes place in a classroom. Learning a language is usually also characterized by error correction and rule isolation. In reality, language learning is almost always a mixture of both acquisition and learning: even when purely acquiring a language, some conscious effort towards understanding the language is often made. Central items of both language acquisition and learning are *input*, defined as received language, *output*, defined as produced language, and *interaction* between the language acquirers and providers, the combination of both input and output. Language acquisition is possible when the level of input is slightly above the level of the learner language (Krashen and Terrell 1983: 32), which allows learners to figure out meanings to new expressions among the more familiar and understandable expressions.

Milton (2009: 22 – 25) discusses the relation between word frequencies and language acquisition. He states that the most frequently occurring words are often function and structure words, such as articles, prepositions or conjunctions. Since repetition is a substantial part of language acquisition, the most frequently occurring words also characterize learners' vocabulary growth. Learners tend to have a better understanding of words they encounter on a regular basis than of the words they seldom hear or see in use. Even though the most often occurring function and structure words have a significant role in meaningful language, less frequent words, such as nouns, verbs, and adjectives, seem to weigh more in conveying meanings.

2.3 Video games and second / foreign language acquisition and benefits of playing video games

Studies suggest that people who regularly play video games can outperform those who do not play or rarely play video games in various tasks, such as tracking objects that move at high speed, visual short term memory tests and decision making (Boot et al. 2008: 395). Furthermore, some research has already been done on the connection between language learning and playing video games: according to Sundqvist (2009: 155), extramural language use, such as playing video games, has been proven to have a positive effect on language development and more specifically, on vocabulary test scores.

Most of the video games on the market are in English, and have not always been translated into other languages. This forces non-native English speaking gamers to play the video game in their foreign or second language. Video games can be an extremely motivating tool in language learning since playing them in a foreign language requires vocabulary knowledge necessary to proceed in the game. There are various factors that facilitate understanding the input, such as images, actions, and context. These factors enable learning through trial and error. Video games often provide a great amount of linguistic information: they include authentic input and vocabulary in a context, which is beneficial to vocabulary acquisition and recall. In addition, some games encourage interaction with other players, either through oral or written communication. This kind of interaction is likely to include words related to the game, which also contributes to language and especially vocabulary development. Both language learning and language acquisition are present when playing video games in a foreign language. Players can consciously look for explanations for certain expressions and their meanings or even play a video game in a foreign language in order to learn a new language, or they can play a video game and acquire the language with no conscious effort.

According to Uuskoski (2011: 31), playing video games in English seems to have a relation to English grades at school. It was found that when compared to other extramural activities in English, playing video games had the most significant positive effect on upper secondary school students' English grades. Upper secondary school students also most often mentioned vocabulary as the factor that had improved through gaming. Furthermore, Sundqvist (2009: 156) also argues that the most effective extramural activity for vocabulary acquisition alongside surfing the Internet was playing video games. A number of research articles that focus on language learning and video games state that vocabulary is indeed one of the aspects of the language learned from playing video games, but very little to no research has been conducted on what kind of vocabulary knowledge gaming develops.

3 THE PRESENT STUDY

3.1 Research questions and the aim of the study

The aim of the present study is to examine 8th grade pupils' experiences on learning English vocabulary through playing video games. More specifically, it aims to answer the following research questions: What kind of vocabulary is, based on personal experiences, acquired by playing video games? From what kinds of games is vocabulary acquired? Furthermore, it aims at revealing to what extent the pupils feel they have learned new vocabulary through playing video games and if vocabulary acquisition through playing video games has had a perceived positive effect on English grades. The present study also aims to discover if the experience of notable vocabulary acquisition via playing video games is related to achieving good grades in English, how the frequency of playing video games affects the experience of vocabulary acquisition and whether there are any differences between the two genders. The study focuses on learners' experiences because studying vocabulary acquisition via playing video games would otherwise be rather difficult and require more resources than are currently available.

3.2 Data and methods

The data for the present study was collected by carrying out a questionnaire that included both open-ended and closed questions. Closed questions focused mainly on surveying background knowledge about the participants, such as age, gender, and personal gaming history, whereas open-ended questions were used to collect more detailed information about, for example, the kind of vocabulary they have learned by playing video games and the games they recall learning vocabulary from. According to Alanen (2011: 148), new phenomenona are in most cases studied with open-ended questions, and since playing video games is a relatively new phenomenon, the questionnaire was constructed accordingly. The closed questions were constructed by using Likert scales and numerical scales to obtain as reliable data as possible.

The main parts of a questionnaire are title, instructions, questionnaire items, additional information, and a final 'thank you' (Dörnyei and Taguchi 2010: 18-22). Additional information was excluded since the participants were able to ask questions during the questionnaire, but every other main part of a questionnaire was visible to the participants. The instructions were given in both speech and writing, and the participants were able to ask questions during the questionnaire.

Dörnyei and Taguchi (2010: 12-13) state that answering a questionnaire should not take more than 30 minutes, and with learners in mind, one has to take the slowest readers into account as well. I also had to keep in mind the time given by the teacher. The pilot group needed 10 minutes to complete the questionnaire, but since the target group was larger, it was highly likely that it would take longer for them to finish. Thus, the data was collected by using 13 questions in total, eight of which were closed and five of which open-ended.

The data was collected in an 8th grade in May, 2014. Before this, a pilot questionnaire was conducted on two members of the age group and revised based on the results and feedback of the pilot. The number of participants in the actual study was 13. The questionnaire forms were handed out at the beginning of a lesson, and the participants had the time they needed to fill in the questionnaire. The target group was chosen for this study because 14-15-year-olds are currently learning English formally at school and informally in their free time. They also represent the age group that is assumed to have beginner-intermediate level knowledge of the English language, which should make playing various types of video games possible in a foreign language. They are also likely to play video games in one form or another, whether it is games on their smartphones, consoles or computers. Because of their relatively young age, they might be more likely to

recognize and recall the words they have learned in a specific context, such as gaming.

A questionnaire was used as the means for data collection as it allows to get the data required from many participants at once. It also enables getting answers to specific questions, which was crucial to this study.

3.3 Methods of analysis

Since the aim of the study was to focus on the participants' perceptions, the data was primarily analyzed qualitatively. Some quantitative analysis was also needed with factors such as gender and the possible perceived effect on school grades. The quantitative results will solely reflect the answers of this particular group of people and cannot be generalized beyond it because of the small sample size.

The collected data was first read through carefully and then transformed into scales to ease the process of analysis and finding frequencies to certain answers. Due to the small sample size, no transforming into percentages was needed. The answers to the closed questions were simply converted into scales, whereas the answers to the open-ended questions were first categorized into items that were visible throughout the data and after that, the categorized items were counted and converted into scales. At some points, the answers to open-ended questions were attached to the answers of closed questions that they were related to. All of the answers were quite short, which made the categorization easy. After adding every item to a scale, the results were converted into tables that reflected each category and the relations of compared categories. The purpose of converting the results into tables was to clarify the results to the reader and to make items easier to compare. The main focus was on finding similarities among the answers but to also note the differences (Tuomi and Sarajärvi 2004: 95).

After processing the data into a more legible form, it was analyzed both theory prominently (in Finnish *teoriasidonnainen*) and data-prominently (in Finnish *aineistolähtöinen*). In a theory-based analysis, the focus is on the data itself, but the analysis is based on existing theories (Tuomi and Sarajärvi 2004: 98). Even though the field of video games and their relation to language learning has only been studied on a limited scale, the theories of language acquisition enable a theory-based analysis. It does not, however, fully apply to the present study due to the notable weight of video games and learners' own perceptions. Tuomi and Sarajärvi (2004: 98) state that a theory-based

analysis moves from a data-based analysis that excludes the existing theories to a theory-based analysis. A factor that supported ignoring the existing theories at the beginning of the analysis was the perception-based focus of the present study. Moving from a data-based analysis and later linking it to existing theories, with the weight still being on the data, seemed the best possible way to approach the data of the present study.

4 PERCEIVED VOCABULARY ACQUISITION THROUGH PLAYING VIDEO GAMES

4.1 Background

The pupils were asked questions related to their background, such as gender, previous grade in English, and frequency of playing video games. The following table shows the answers the sample provided:

Table 1: Participants' history and frequency of playing video games

	Quantity	Grade		Starting age (years)		Gaming frequency	
Male	7	**8**	1	**< 5**	0	**A few times a year**	0
		9	5	**< 10**	4	**Every now and then**	1
		10	1	**<15**	3	**Once a week**	1
						Multiple times a week	5
Female	6	**8**	3	**< 5**	0	**A few times a year**	1
		9	2	**< 10**	4	**Every now and then**	1
		10	2	**<15**	2	**Once a week**	3
						Multiple times a week	1

Since the participants were all 8th-graders, their age was omitted as indifferent for the results. One of the female participants could not remember her previous English grade, so she gave two grades. In Table 1, her grade has been marked as a 1 for each grade she gave. Overall, the grades of the participants were rather high, and do not necessarily depict the variation in grades of an average class in Finland. The results in the frequency of playing video games were also quite high since

every participant played video games and the vast majority of them played them regularly. The high frequency of playing video games can partially rely on mobile games that recurrently came forth in the results of the questionnaire.

The male and female participants did not show great variation in their English grades, but they showed a slight difference in how often they play video games. On average, the male participants played video games multiple times a week, whereas the female participants only played once a week. The majority of the participants had also started playing video games when they were under ten years old.

The video game genres included in the questionnaire were action, role playing, driving, strategy, simulation, mobile, and other. The following table shows what kinds of video games the participants had played:

Table 2: Video game genres

	Action	RPG	Driving	Strategy	Simulation	Mobile	Other
Male	6	3	2	3	1	4	4
Female	4	-	1	3	-	4	-

According to the results, the male participants were more likely to play video games of different genres than the female participants. Both genders seemed to have played action, mobile, strategy, and driving games. Only boys had played role playing, simulation, and other kinds of games, even though a few participants had mentioned games of genres not listed above under an open-ended question of game examples. In category 'other', the participants had listed first person shooters and sports games. First person shooters can be categorized as action games, but sports games were a genre that was completely omitted from the questionnaire. It is possible that the categorization of some video games might have caused difficulty to the participants.

The most popular genres of the sample were action and mobile games. The participants who played video games many times a week were likely to play mostly mobile (5/6) and action games (4/6), whereas those who played once a week were likely to play slightly more action games (4/4) than mobile games (3/4). Action games were also popular among those who did not play as frequently as the others (2/3). Furthermore, strategy games were popular among the participants who played video games once a week or more (6/10). The following table shows the most popular genres by the

frequency of playing video games:

Table 3: The most popular genres

	Action	Mobile	Strategy
Many times a week	4	5	3
Once a week	4	3	3
Less than once a week	2	1	-

The open-ended questions that required examples of video games the participants had played received a relatively long list of video games, as can be seen from Table 4. Genres that did not occur in the answers were not included in the table. Categorization of the games was simplified by including games such as first-person shooters in action games even though they are only a close match. Some video games, such as Call of Duty: Modern Warfare 3, The Elder Scrolls V: Skyrim, and FIFA 12 were only listed by the name of the franchise (Call of Duty, The Elder Scrolls, FIFA) instead of the full name of the game due to the similar nature of the games of these game series. The table shows the video games listed by their genre and number of occurrence in descending order:

Table 4: Video games listed by genre and frequency of occurrence

Action	Role playing	Driving	Mobile	Other
Postal 2	Guild Wars 1	Rally 1	Candy Crush Saga 4	FIFA 5
Call of Duty 2		Mario Kart 1	2048 2	Sly Cooper 3
Battlefield 2		WRC 1	Geometry Dash 2	NLH 3
Team Fortress 1		Forza 1	Hayday 2	Madden 1
Tomb Raider 1			My Little Pony 1	Snow 1
Uncharted 1			Logo quiz 1	Outlast 1
GTA 1				Minecraft 1
Counter Strike 1				Ace of Spades 1
War Thunder 1				
League of Legends 1				
Terraria 1				
The Elder Scrolls 1				

The games that occurred in more than one pupil's paper were FIFA (5), Candy Crush Saga (4), Sly Cooper (3), NLH (3), Postal (2), Call of Duty (2), Battlefield (2), 2048 (2), Hayday (2), and

Geometry Dash (2). The longest lists of mentioned games were action, other, and mobile. The long lists of video games under 'action' and 'mobile' match the most popular video game genres of the sample group, but another quite popular genre, strategy, was completely omitted from the examples of played video games. Instead, the 'other' genre was well represented in the examples. Due to the participants not having a chance to think about their answers beforehand and the limited time to answer the questionnaire, the list of video games they wrote down is likely quite limited and does not represent the full spectrum of video games they have played.

4.2 Video games and vocabulary acquisition

To find out what kind of vocabulary the participants have acquired, we first need to pay attention to the kinds of items vocabulary consists of. According to the results, the participants perceived that the vocabulary they had mostly acquired by playing video games consisted of nouns and verbs. Both genders showed a similar perception of acquired vocabulary elements. Five participants had also marked adjectives and / or adverbs as acquired vocabulary elements. The elements and their occurrence are listed in Table 5 by gender.

Table 5: The kind of vocabulary acquired from video games: items

	Nouns	Adj./adv.*	Verbs	Pronouns	Num.*	Prep.*	Particles
Male	7	3	4	2	-	1	1
Female	5	2	5	1	2	1	3

* Adjectives / adverbs, numerals, prepositions

According to Milton (2009: 22 - 23), the most frequently occurring vocabulary elements are almost always function and structure words, such as articles, prepositions or conjunctions. However, in the present study, only three pupils marked pronouns, two marked prepositions, and four marked particles as vocabulary elements they had learned via playing video games. Considering that by the time the participants answered the questionnaire, they had been formally learning English at school for at least five years and, thus, have presumably encountered the most common vocabulary

elements numerous times. Function and structure words are essential for grammatical and meaningful language use, but the less frequent words, such as nouns and verbs, carry even more meaning in a sentence (Milton 2009: 23). Therefore, it is highly likely that the pupils remember learning these kinds of words from a specific context, in this case, from video games.

Two open-ended questions were used in order to expand the knowledge of the acquired vocabulary. Their purpose was to get examples of words the pupils have acquired through playing video games and to see if the example words correlate with the results of the question related to vocabulary elements. In the open-ended questions the pupils were asked to write down examples of vocabulary themes and words they think they have learned through playing video games. Some participants chose not to answer the questions, which might originate from not being able to think of any specific word or theme acquired by playing video games or, more simply, lack of motivation. Some pupils also wrote things such as 'I don't know' or '...and something, I can't remember right now'. The themes that the sample group perceived they had learned vocabulary from were life, agriculture, sports, food, taking care of something, ghetto, war, names of objects, plants, conversation, basic vocabulary, and the Middle Ages. For the word examples, a number of pupils wrote down words related to game menus, controls and to the game itself, such as numbers, *start, pause, continue, quit, lose,* and *settings*. Other words were clearly related to the games they had listed earlier. Examples of such words were *crush, sweet, sugar, delicious, war, history, mineral, oblivion, elder, possession,* and *pace*. Since these words were verbs, nouns, and adjectives, they correlated with the vocabulary elements the pupils perceived to have acquired through video games.

When asked from which video games they had learned vocabulary from, most of the participants listed either the full list of the games they had played, which they already listed earlier in the questionnaire, or a part of the list they had given earlier. Some participants left the slot empty, whereas some even introduced a game they had not mentioned earlier. Most of the participants answered by giving the names of the games, but some answered by the themes or other qualities of the games, such as 'adventure' or 'anything with multiplayer'.

Tables 6 and 7 show the effect of played video game genres on perceived vocabulary learning by gender: 0 means no learning, whereas 5 stands for very much learning.

Table 6: The effect of video game genres on perceived vocabulary learning: male participants

	Action	RPG*	Driving	Strategy	Simulation	Mobile	Other
0							
1	1						
2							
3	1	1		1		1	
4	1			1		2	1
5	3	2	2	1	1	2	2

Table 7: The effect of video game genres on perceived vocabulary learning: female participants

	Action	RPG*	Driving	Strategy	Simulation	Mobile	Other
0							
1							
2	1		2	1		3	1
3	3			2		2	
4							
5							

*Role-playing game

As can be seen in tables 6 and 7, the male participants' perceived the level of vocabulary acquisition through playing video games is higher than that of the female participants: on a scale $0-5$, five male participants had a number higher than three, whereas none of the female participants had perceived their vocabulary learning to be as high. The gender differences in the perceived level of vocabulary acquisition are presumably related to the frequency of playing video games: Table 1 showed that in general, the male participants played video games more frequently than the female participants. The male participants perceived the greatest level of vocabulary acquisition from action, role playing, driving, mobile, and 'other' games, whereas the female participants perceived the level of acquisition to be the greatest from action, strategy, and mobile games. Below, Table 8 shows the relation of the frequency of playing video games, the perceived effect on learning new vocabulary, and the perceived positive effect on English grades.

Table 8: Frequency of playing, perceived learning, perceived effect on grade (on a scale 0 – 5), and grade

	Frequency of playing	Perceived learning	Perceived effect on grade	Grade (4-10)
Male	Every now and then	1	2	10
	Once a week	4	2	9
	Many times a week	4	3	9
	Many times a week	5	4	9
	Many times a week	5	5	9
	Many times a week	3	2	8
	Many times a week	5	4	9
Female	A few times a year	3	4	10
	Every now and then	2	2	8 - 9
	Once a week	2	5	10
	Once a week	3	4	8
	Once a week	3	2	9
	Many times a week	2	0	8

The participants who played video games many times a week were likely to give a higher number (five to two) to their perceived learning through video games, whereas those who played less often did not give more than a three to their learning. Therefore, it can be assumed that the frequency of playing video games and having contact with new vocabulary through video games boost vocabulary acquisition. Six participants gave the same or a higher number for the perceived effect on their grade than they did for the perceived effect of learning new words. Seven pupils gave a lower number for the effect on their grade than on their level of acquisition. According to the results, the vocabulary they have acquired via playing video games has either had no effect, some effect, or a major effect on their grade. 12 out of 13 participants perceived at least a slight positive effect on their grade, which correlates with Uusikoski's (2011) results. Since the sample group's grades did not show great variation, it cannot be determined if the frequency of playing video games or perceived acquisition of vocabulary is truly related to their English grades. Those who perceived the effect on their grade as a four of a five had English grades from 8 to 10. The same distribution of grades applied to those who perceived a lower or no positive effect on their grades.

4.3 Summary

According to the sample group's perceptions and examples, the vocabulary that they have acquired via playing video games consists mostly of nouns and verbs, but also of adjectives and / or adverbs. The pupils' perceptions of acquired vocabulary elements correlated with their examples. The acquired vocabulary varied from everyday words to medieval and military terms, depending on the video games the participants have played. The most played genres of the sample group were action, mobile, and other, which included genres such as stealth and sports that were not listed in the questionnaire. A slight gender difference occurred in the most played video game genres: the female participants played more mobile games than action games, whereas the male participants played more action than mobile games. Still, both genders showed a similar pattern in the most played video game genres.

The data did not reveal a single game through which many participants had learned new words, but games such as FIFA, Candy Crush Saga, Sly Cooper, and NHL can be found in three or more participants' papers. This might have to do with peers playing together and the popularity of certain games in general.

Uusikoski (2011: 56) found that 78% of those who played video games up to five hours a week felt that playing video games had a positive effect on their English grade, which the present study also confirms. Every participant of the present study felt that they had acquired at least some vocabulary through playing video games, and 12 out of 13 participants perceived that their vocabulary acquisition via playing video games has had a positive effect on their English grade. Whether the perceived effect on vocabulary acquisition or the effect on grade was higher varied. The male and female participants showed a difference in the perception of vocabulary acquisition through playing video games: on average, the male participants perceived a high level of vocabulary acquisition through video games, whereas the female participants perceived a medium level of vocabulary acquisition. The lower level of vocabulary acquisition might be related to the fact that the female participants played more mobile games than games of other genres, while the male participants played more games of other genres. Perhaps mobile games contain less vocabulary than games of some other genres.

5 CONCLUSION

The present study aimed at discovering what kind of vocabulary is acquired via playing video games and through what kinds of games vocabulary is acquired by focusing on the pupils' personal experiences. Additionally, it aimed at revealing to what extent the participants felt they had acquired vocabulary via playing video games and whether they felt it had positively affected their English grades. Furthermore, the secondary goals of the present study were to discover if there was a connection between the experience of notable vocabulary acquisition through playing video games and achieving good grades in English and how the frequency of playing video games affects the experienced level of vocabulary acquisition. Another point of focus was gender differences in these aspects.

Every participant of the present study played video games at least a few times a year, and the majority of the participants had started playing video games between the ages of five and ten. On average, the male participants played video games many times a week, whereas the female participants played them once a week. Both genres played action, mobile, strategy, and driving games, but in addition to these genres, the boys also played role playing, simulation, and undefined 'other' games. The most popular genres among both genders were action and mobile games: the female participants played mobile games as much as they did action games, and the male participants played more action than mobile games. Furthermore, the participants who played video games many times a week played slightly more mobile than action games, whereas those who played once a week played slightly more action than mobile games. The third most popular genre was strategy. The list of games the participants had played consisted of action, 'other', mobile, driving, and role playing games, and games such as FIFA, Candy Crush Saga, and Sly Cooper were mentioned by three or more pupils.

The vocabulary the pupils felt they had acquired via playing video games consisted primarily of nouns and verbs, but also of adjectives and / or adverbs. Only some participants perceived they had acquired function and structure words, such as pronouns, prepositions, and particles, even though such words often occur more frequently than nouns and verbs (Milton 2009: 23). As pointed out above, the pupils are likely already familiar with the most frequent function and structure words and do not therefore recognize learning them from video games. Nouns and verbs also carry more weigh on meaning than function and structure words, and can thus be more crucial in making progress in a

video game. In addition, these kinds of words are often related to the theme, events, and setting of the game, which can make such words and the place one has learned them from more memorizable. The word examples the participants gave matched the categories from which they claimed to have acquired vocabulary.

When asked from which video games they had learned words from, the majority of the participants answered by giving the same list of games that they gave for the question of played video games. Since the participants were intermediate level English users, it seems plausible that they have acquired vocabulary from almost every game they have played in English. On average, the male participants perceived their level of vocabulary acquisition as high, whereas the female participants perceived their level of acquisition as average. Those participants who played video games more often were more likely to perceive a higher level of acquisition than those who did not play as often. Since the male participants played more video games than the female participants, it is only logical that they perceived their level of acquisition to be higher than the female participants. This also correlates with Uusikoski's (2011) study, where the male participants also played more video games than the female participants. 12 out of 13 participants felt that playing video games had had a positive effect on their English grade, which is quite close to the 87% perceived positive effect that upper secondary school students of Uusikoski's sample group had.

Because video game genres often overlap, it is possible that the categorization of video games might have caused difficulty to the participants. Furthermore, 8th grade pupils may not have the required knowledge about different genres to be able to categorize them correctly. Simplified video game genres that were used in the questionnaire may have helped the process of categorization, but the pupils may also have been slightly confused about which game belongs where. The genre of sports games was omitted from the questionnaire even though it might have been beneficial not to have it under 'other' but as its own genre. Another limitation of the present study was time: some pupils chose not to answer some of the open-ended questions, which is possibly related to not being able to think of an example word or game in time. This could have been avoided by giving the participants a chance to think about their answers beforehand.

The present study had only 13 participants of which everyone had an English grade of 8 or higher, and all of them played video games. It is probable that the sample group does not represent the full variety of the age group and, therefore, the results of the present study cannot be generalized. The size of the sample was, however, suitable for a Bachelor's Thesis. For being able to apply the vocabulary acquisition through video games to teaching and further understanding the process of

language acquisition, the connection between vocabulary acquisition and playing video games could be studied in more detail.

Bibliography

Alanen, R. (2011). *Kysely tutkijan työkaluna*. In Kalaja, P., Dufva, H. (eds.) *Kieltä tutkimassa: tutkielman laatijan opas*. Helsinki: Finn Lectura, 146-161.

Apperley, T. (2006). *Genre and Game Studies: Toward a Critical Approach to Video Game Genres*. Academia.edu [Online].
Available: http://www.academia.edu/385966/Genre_and_Game_Studies_Toward_ a_Critical_Approach_to_Video_Game_Genres

Boot, W. R., Kramer A. F., Simons D. J., Fabiani, M., Gratton, G. (2008). The effects of video game playing on attention, memory, and executive control. *Acta Psychologica* 129, 387-398.

Chou, C. and Tsai, M.-J. (2007). Gender Differences in Taiwan High School Students' Computer Game Playing. *Computers in Human Behavior* 23, 812–824.

Dörnyei, Z. and Taguchi, T. (2010). *Questionnaires in Second Language Research: Construction, Administration, and Processing* (2nd edition). New York; London: Routledge.

Heikkilä, T. (2008). *Tilastollinen tutkimus* (7th edition). Helsinki: Edita.Business.

Johnson, K. (2008). *An Introduction to Foreign Language Learning and Teaching* (2ndedition). Harlow: Pearson Education Limited.

Karvinen, J. and Mäyrä, F. (2011). Pelaajabarometri 2011: Pelaamisen muutos [Online].
Available: http://tampub.uta.fi/handle/10024/65502.

Krashen, S. D. and Terrell, T. D. (1983). *The natural approach: Language acquisition in the classroom*. Hayward, CA: Alemany Press.

Leppänen, S. and Piirainen-Marsh, A. (2009). Language policy in the making: an analysis of bilingual gaming activities. *Language Policy* 8(3), 261-284.

Milton, J. (2009). *Second Language Acquisition: Measuring Second Language Vocabulary*
Acquistion. Clevedon: Multilingual Matters.

Sundqvist, P. (2009). *Extramural English Matters: Out-of-school English and its impact on*
Swedish ninth graders' oral proficiency and vocabulary. Karlstad: Karlstad
University Press.

The first video game? (n.d.). Long Island: Brookhaven National Laboratory [Online].
Available: http://www.aps.org/publications/apsnews/200810/physicshistory.cfm

Tuomi, J. and Sarajärvi, A. (2004). *Laadullinen tutkimus ja sisällönanalyysi* (1st - 3rd edition).
Jyväskylä: Gummerus Kirjapaino Oy.

Uuskoski, O. (2011). *Playing video games: A waste of time... or not?* University of Helsinki, a
Master's Thesis [online]. Available:
https://helda.helsinki.fi/bitstream/handle/10138/35037/playingv.pdf?Sequence=1.

Video Gamers in Europe 2008 (2008). London: ISFE [Online]. Available:
http://www.isfe.eu/sites/isfe.eu/files/attachments/euro_summary_-_isfe_consumer_study.pdf

Video Gamers in Europe 2010 (2010). London: ISFE [Online]. Available:
http://www.isfe.eu/sites/isfe.eu/files/video_gamers_in_europe_2010.pdf

Video Gamers in Europe 2012 (2012). London: ISFE [Online]. Available:
http://www.isfe.eu/sites/isfe.eu/files/attachments/euro_summary_-_isfe_consumer_study.pdf

Kysely

Englannin kielen sanaston oppiminen videopelaamisen kautta

Tällä kyselyllä tutkitaan kahdeksasluokkalaisten kokemuksia englannin kielen sanastonoppimisesta videopelaamisen kautta. Vastaa kysymyksiin joko ympyröimällä vaihtoehto (kysymykset, joissa useita vastausvaihtoehtoja) tai kirjoittamalla vastauksesi kysymyksen alle (kysymykset, joissa ei ole valmiita vastausvaihtoehtoja). Jos tarvitset lisää tilaa vastaamiseen, voit kirjoittaa vastauksen kyselyn loppuun kirjoittamalla ensin kysymyksen, johon vastaat ja sen perään vastauksesi. Huomioithan, että videopelaaminen käsittää sekä tietokoneella ja pelikonsolilla pelattavat pelit että kännykällä ja tabletilla pelattavat mobiilipelit.

Ikä:

Viimeisin englannin kielen todistusarvosanasi?

      4   5   6   7   8   9   10

Sukupuoli

  Mies   Nainen

Kuinka usein harrastat videopelaamista englannin kielellä?

En koskaan   Harvemmin kuin kerran vuodessa   Muutaman kerran vuodessa
Kerran kuussa   Kerran viikossa   Useita kertoja viikossa
Vähintään kerran päivässä   Muu (kirjoita):

Minkä ikäisenä olet aloittanut pelaamaan videopelejä englannin kielellä?

En pelaa mobiili-/videopelejä englannin kielellä   Alle 5-vuotiaana   Alle 10-vuotiaana

Alle 15-vuotiaana

Millaisia videopelejä pelaat?

Toiminta-/seikkailupelejä   Roolipelejä   Ajopelejä   Strategiapelejä

Simulaatiopelejä   Mobiilipelejä   Muita (kirjoita):

Kirjoita esimerkkejä videopeleistä, joita olet pelannut.

Koetko oppineesi englannin kielen sanastoa videopelaamisen kautta? (0 = ei yhtään, 5 = paljon)

0   1   2   3   4   5

Minkä sanaluokkien sanastoa koet oppineesi videopelaamisen kautta?

Substantiiveja (=esine-/asiasanat)   Adjektiiveja/adverbejä (=kuvailevat sanat)   Verbejä (=tekemistä/olemista ilmaisevat sanat)   Pronomineja (=henkilöihin/asioihin viittaavat sanat) Numeraaleja (=lukusanat)   Prepositioita (=esim. To, on, under)   Partikkeleita (=konjunktiot, esim. Ja, mutta, koska; huudahdukset, kuten 'ai')

Minkä teemojen tai aihepiirien sanastoa koet oppineesi videopelaamisen kautta?

Kirjoita mahdollisimman monta esimerkkiä sanoista, joita koet oppineesi videopelaamisen kautta

24

Kirjoita esimerkkejä video-/mobiilipeleistä, joiden kautta koet oppineesi sanastoa:

Koetko, että video-/mobiilipelaamisen kautta opittu sanasto on vaikuttanut positiivisesti englannin kielen kouluarvosanoihisi? 0 = ei yhtään, 5 = paljon

0   1   2   3   4   5

Kiitos!