EFFECTS OF VIDEO GAMES:

English language learning of girls

Bachelor's Thesis

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Tiivistelmä – Abstract

Erilaiset kannettavat laitteet ovat lisääntyneet viimeisen muutaman vuoden aikana ja levinneet yleiseen käyttöön. Tämä levinneisyys on johtanut myös siihen, että videopelejä on saatavilla enemmän ja pelaaminen on yleistynyt. Samalla pelaamisen tutkimus on lisääntynyt ja videopelit on havaittu hyödyllisiksi.

Toisaalta globaalisaatio ja teknologian kehitys on johtanut siihen, että englanti on tullut osaksi arkea entistä enemmän. Videopelit tarjoavat hauskan ja laajan oppimisympäristön, mutta videopelien vaikutuksia kielenoppimiseen ei kuitenkaan ole tutkittu vielä kovinkaan paljoa. Etenkin tyttöjen pelaamisen tutkiminen on vielä vähäistä, koska perinteisesti ajatellaan, että vain pojat pelaavat. Lisäksi on huomattu, että ne pojat, jotka pelaavat videopelejä, menestyvät englannissa paremmin kuin tytöt.

Tämän tutkimuksen tarkoituksena on selvittää oppivatko tytöt englantia videopelejä pelaamalla ja kerätä myös tietoa heidän pelimieltymyksistään. Aineisto kerättiin kyselylomakkeena Jyväskylän yliopistossa ja siihen osallistui yhteensä 133 naispuolista opiskelijaa. Kysymykset liittyivät tyttöjen kokemuksiin ja mielikuviin.

Tuloksista kävi ilmi, että suurin osa vastaajista koki videopelien vaikuttaneen englannin kielen taitoonsa positiivisella tavalla. Vaikutukset ylsivät monille eri kielitaidon alueille ja etenkin sanaston koettiin parantuneen. Yleisimpiä syitä olivat, että pelit ovat englanniksi ja että niissä ei pääse eteen päin, jos ei ymmärrä englantia. Vastaajat saattoivat istua sanakirja kädessä pelatessaan tai yrittivät muuten selvittää, mitä pelissä puhuttiin. Tällöin voidaan olettaa, että pelit ovat motivoivia ja hyödyllisiä. Lisäksi voidaan ajatella, että peleistä voisi olla hyötyä kouluopetuksessa niiden moninaisuuden takia. Ne sopivat hyvin erilaisille oppijoille ja tarjoavat jotain mielenkiintoista melkein jokaiselle. Tutkimus antaa hyvän yleiskuvan 18-28-vuotiaiden suomalaisten naisten pelaamisesta, mutta koska tutkimuksessa oli omat ongelmansa, ei tuloksia voida pitää yleispätevänä, vaan ne pitää ymmärtää suuntaa antavana.

Asiasanat – Keywords New digital media, video games, youth culture, second language acquisition, flow, motivation
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1   INTRODUCTION

Playing video games has become a very common practice in the past few years as games have become more available to a larger audience. This is most likely due to various devices such as mobile phones becoming affordable to the majority of the world citizens as well as various advances in technology that allow for more hardware power in an increasingly small size. The introduction of services such as Facebook as well as various smartphone games has made video games available to almost anyone and almost everywhere. As a result, the field of game studies that was born approximately 30 or so years ago has grown extensively as well and has led to the effects of gaming being studied on multiple levels. Video games and the effects of playing seem to appear more on the news as well rather than being exclusive to gaming focused magazines and websites such as *Pelaaja* (2002-). However, the number of boys in these studies is substantial and girls still seem to be rather few. It is suggested that this phenomenon may be due to gaming being more socially acceptable to boys than it is to girls and that there are more games designed for boys than there are for girls, which ultimately leads to a lack of interest.

At the same time, gaming is being found as an increasingly positive phenomenon. For example, even though it has traditionally been quite an established fact that girls are generally better at languages than boys are, some studies suggest that the boys who play video games are often better at English than girls. As a result, there has been an attempt to encourage girls to play video games more often as well. Some of this encouragement stems from video game companies realising there is a large source of potential income they have not noticed before. Traditionally some games have been specifically catered for girls, often involving cute and nurturing themes (looking after a puppy, various Barbie games). The games targeted at girls are still very much like this but the variety of games has increased in general, thus allowing for a greater variety of interests. Effectively, there has been an increase in female gamers; however, girls seem to play less and less after a certain point of age, specifically when young adulthood is reached.

If gaming can be beneficial to girls the same way it is to boys, it is important to acquire more information on the gaming habits of girls. This data may be valuable in designing games that can interest both sexes as well. If it is found that both boys and girls can better their language skills by playing video games, then perhaps gaming should be incorporated into the education system more strongly and made better use of as a fun and easy way of learning than it currently is. Another focus

of interest are the reasons as to why it is that boys play video games more than girls do, if they do. Due to the limitations of the thesis, the study focuses on acquiring information on how much girls play, why they play, what kinds of games they play and whether they feel it has taught them English language skills, what areas these language skills focus on, as well as whether they feel there are differences between female and male players and what these differences are, rather than concretely testing their abilities.

2 THE ROLE OF ENGLISH IN LEARNING THROUGH VIDEO GAMES

The present study is concerned with the topics of *language acquisition* and *language learning* while playing video games with the focus being specifically on girls. The difference between the two is that language acquisition is seen as a process that takes place without much conscious effort whereas language learning is a process that most likely has required conscious effort the same way one would expect when learning subjects such as history (Saville-Troike 2012: 13-15). The paper is more concerned with language acquisition as opposed to language learning as players interact in the game world as they would in the real world, receiving input and often producing output quite naturally, often without a conscious effort.

2.1 Second language acquisition

Considering the fact that the majority of television shows and mainstream music is mostly in English, it is next to impossible to avoid hearing English on a daily basis, at least in Finland. However, *input*, the language the learner is exposed to, of the target language is not enough to learn it and *output*, meaningful and reciprocal production of target language, is required as well (Saville-Troike 2012: 32). Output can be produced through various means: in terms of television and music it often comes through as imitation, discussion, fan fiction and repetition of lines spoken by the characters of a show.

According to Piirainen-Marsh and Tainio (2009), repetition and imitation are central to first and second language acquisition as well as language learning. Essentially, repetition involves the

processing of the structures present in the target language, which eventually enables the user to use language in a more automatic and spontaneous manner. It is important to note that this type of shift can only occur if the repeated element is relevant and meaningful to the user. Language drills, endless repetition and memorisation of specific aspects of a language are often boring and whereas they can lead to better grades at school, often do not teach actual language use (Yule 2010: 190).

Repetition is a teaching method that has been used at schools by teachers for a long time. The main functions are to direct the students, give them feedback and help them engage in *language play*. This type of play can generally refer to elements such as play with the meanings, structures or sounds of utterances. In terms of video games, dialogue is usually presented as visual text, animations of characters as well as spoken utterances. The opportunities for language play are very high. The study conducted by Piirainen-Marsh and Tainio (2009) in which four boys, two at a time, play a video game together displays that the participants engage in language play frequently. Utterances spoken by the game characters are frequently repeated and imitated, as well as moulded, by the participants, often before the utterance is spoken or at a later time in the game. This type of repetition and imitation of meaningful pieces of events in the game enable the players to practice their speech as well as their vocabulary and grammatical structures. Occasionally, the participants attempt to imitate the game characters but use the incorrect word. However, Piirainen-Marsh and Tainio (2009) point out that these utterances are grammatically correct, even if they do not match the exact words of the game character. This would imply that the boys' *communicative competence*, ability to use the language in an appropriate and accurate way, and especially *grammatical competence*, referring to correct use of words and structures of language, is quite high (Yule 2010: 195)

It is also important to note that the participants are said to be smiling and laughing multiple times during the study, evidently enjoying the activity. They do not appear to be experiencing any *negative affective factors*, negative feelings concerning motivation, attitude or anxiety levels (Saville-Troike 2012: 40), such as boredom and stress, as they are able to produce utterances of the language despite the fact that there are two of them in the room and their session is being recorded. The boys also show interest in the game and are motivated to beat it. It is suggested by Yule (2010: 189) that textbooks that are boring and dull as well as classroom surroundings that are felt to be unpleasant can cause negative affective factors to arise. The number of Finnish students who enjoy school was shown to be one of the worst in Europe and the students also reported school to be tiresome and somewhat stressful (Kämppi et al. 2010). However, schoolwork itself was not rated as

particularly difficult nor was the workload reported to be too large in size. Therefore, it can be assumed that the reason for dissatisfaction with school is due to some other phenomenon. Finnish students may be experiencing negative affective factors and it is possible that the source is the general classroom surroundings or material used in class.

2.2 English in the media

Video games, any electronic game played on a video device, are a prominent part of youth culture. According to Leppänen (2007), English has become an essential part of the lives of young people living in Finland. Most if not all young people living in Finland have studied English at school and it is also the most common choice of language used in various media such as television and music. Leppänen (2007) also states that the amount of content in English on the Internet as a whole was 84% in 1997. Additionally, English is required for professional purposes and there are a number of companies that use English as their working language, despite the company being located in Finland. It is also stated that English is often the only common language spoken by the various participants in companies and for many, it is the only means of intercultural communication. Moreover, young people often seem to deliberately choose English over Finnish even when they clearly could choose Finnish or some other language. In other words, English is an increasingly significant part of the daily lives as well as future lives of Finns, young people and adults alike. What should be further noted about games is that they are, by large, in English. The majority of games come with English audio, subtitles and various menus (Leppänen 2007). Often games whose audio is in a language other than English still include English subtitles as well, exempli gratia many Japanese games.

However, what seems to be overlooked is the fact that video games encompass multiple media. The study and analysis of lyrics in music, dialogues in television and written media in general seems to be quite extensive, whereas the study of video games is still relatively new and few in the aspect of language (Piirainen-Marsh and Tainia 2009). It should be pointed out that many video games have an interactive narrative that the player can affect and mould as they play, even in cases where the story is set, the player is still experiencing the story and the world as an active part of them. This narrative is often auditive as well as visible in the form of both audio and subtitling. Many games also have other written material left for the player to find, varying from simple notes, graffiti and magazine headlines to books of the game world's history and more. It is also very common to have

music incorporated in games, ranging from music specifically made for the game to music made by various artists. For example, in the *Grand Theft Auto* series, the player has access to an in-game radio that has many different types of music. This radio is limited to the songs put into the system by the developers but there is still quite a large variety available to the player by default. Many games also allow the player to add their own music into the system and music has its very own genre in the game industry as well. The most notable music games are probably the *SingStar* series in which the player chooses a song to sing, often with or against other people, and is shown the lyrics for the song on the screen. It is also becoming increasingly common to record one's playing for live streaming or walkthroughs as well as make diaries about gaming. These recordings are usually commented by the player or players as well as the people watching them. Most games also include their own website and forum where players can discuss, learn and read about the game or other topics, as well as submit their own art, whether it is in a written form or a drawing. It should be noted that most of these communities seem to function in English and even the websites that do not operate in English often employ *codeswitching*, where words or phrases of one language are borrowed into another language. Reasons for this may vary: the Finnish game discourse might not be adequate in that the player does know what a specific word means but it may not exist in Finnish or it might take too much time to translate the word while playing (Leppänen 2007). However, the appropriate and skilful use of codeswitching as a strategy requires some knowledge and understanding of both languages. What should be taken from this is that video games are a portal to multiple media as well as learning methods.

2.3 Video games and learning

In the past few decades, the effects of video games have been discussed widely and have become a target of study. The general consensus in the 21st century still seems to be that video games are not worth the time and they promote violence, sexism and addiction. It is also often stated that video games affect school performance negatively as students play too much, too often and late into the night. This has led to a certain amount of resistance and rejection of video games by the public that can be detected as negative media attention and almost complete lack of appearance in education. However, it should be noted that there is no conclusive data of video games having such negative effects on the players of video games.

When one considers the history of video games and the number of players, it might seem more obvious that whereas there are some individual cases wherein players display negative effects such as violence, it is still only a very small minority. To give evidence for this, one should consider the brief history of video games, focusing on the point at which video games became widely popular to their current standing in society. The introduction of Nintendo's handheld game console GameBoy in 1989 enabled playing video games anywhere and at any time, which can be considered the turning point for video games that made them popular and a significant part of youth culture. According to de Aguilera and Méndiz (2003: 2), the number of people who play video games was already in millions at the time of the publication of their research in 2003. In the past ten years, video games have spread and become even more available. It is very challenging to recite any specific numbers as the number of games and platforms are so large. However, the number can be assumed to be extremely high as some games alone have millions of players. For example, according to Activision Blizzard's press release (2012), the company's game *Diablo III* had sold over 12 million copies in December 31, 2012, roughly half a year after the game's initial release. Another title by the same company has 9.6 million subscribers, which means there are nearly 10 million players paying to play the game on a monthly basis. Taking into consideration the spread of smartphones, tablets and technology in general, it can be assumed that video games are a prominent part of the youth culture today. In fact, according to Karvinen and Mäyrä (2011), almost 80% out of about a thousand people play video games. What is of importance to the present study is the number of children and young people playing. Out of all the children and teens, both boys and girls, over 90% play video games either actively or at least once a month. After the age of 19, differences between men and women begin to emerge in that, despite the fact both sexes play video games, men clearly play more actively than women. Nonetheless, from this data it can be concluded that video games are important and relevant to many young people.

Whereas there are no proven negative effects of gaming, there is a large quantity of evidence that proves video games positive effects. Some examples of studies proving the beneficial nature of video games are Kühn et al.'s (2014: 265-271) study on the increase of grey matter as a result of playing *Super Mario*, Franceschini et al.'s (2013: 462-466) study concerning the improvements of dyslexic children's reading skills and attention, Rosser Jr. et al.'s (2007: 181-186) study that shows surgeons who play video games tend to perform better and faster operations using the latest technology than their non-playing colleagues, and this is only to mention a few studies. People who play video games have consistently been shown to display better reflexes, motor co-ordination,

concentration, problem solving skills, critical thinking, creativity and many other features than their peers who do not play video games (de Aguilera and Méndiz 2003) as also demonstrated in the studies mentioned above. One of the reasons for this could be that video games are good at inducing the *flow*, essentially the ultimate form of concentration where hours spent on a single activity can feel like minutes, experience in the player (Cowley et al. 2008). There are multiple reasons for this, one of the most prominent ones being the variety in games that enable the player to easily choose the type of activity they wish to engage in and to be in an almost constant interaction with the activity and the game world. It is also easy for the player to choose the level of difficulty most suitable for them, which allows them to stay at the most proximate zone of difficulty. Within the game, players are also often allowed a significant amount of freedom to choose the activity they would like to engage in. For example, many *Massively Multiplayer Online* (MMO) games, such as *Guild Wars 2*, include a number of *mini-games*, games within the game, crafting, fighting and more. This gives the player freedom of choice and, essentially, control. In games, it pays to take risks and failure is not punished or seen as a negative feature to eliminate. On the contrary, making mistakes is encouraged and they are a significant part of the game in that players are required to learn from them in order to advance in the game. It is also one of the features of games that allows for players to distance themselves from their real life concerns and instead focus on the concerns their character is involved with. Additionally, games offer very clear goals that often cannot be interpreted in more than one way in their context and there is typically an abundance of immediate feedback. Overall, games fulfil every requirement set for achieving flow listed by Crowley et al. (2008).

2.4 Video games and pedagogy

When approaching the topic of video games, it should be noted that there are several definitions of video games as well as gaming. The definitions stem from the various branches of research; however, for the sake of convenience the present study focuses on the definition by Cowley et al. (2008), according to which "…game-play occurs as a rule-bound, reactive, emergent process of action sequences belonging to one or more players." In other words, video games are interactive, involve a minimum of one person and are governed by rules that set boundaries for actions. The rules can be further divided into different categories: those set by the game developers and those imposed by the player community. The former aim to be absolute and cannot easily be ignored, but rules imposed by players are often optional. For example, in many MMO games, it is often heavily discouraged to attack a monster another player is already fighting. This type of behaviour is often

enabled by the rules related to the game mechanics but disapproved by the players themselves. In other words, in addition to accepting the rules set by the game that the players cannot directly change (rules may be changed overtime to suit player preferences), the community has its own moral rules to follow.

Restlessness and misbehaviour of students has been discussed in the media as well as at schools. It is suggested by some pedagogical frameworks that people are much more willing to abide by rules if they can partake in their creation and Saloviita (2008: 78) suggests that the best course of action teachers can take is to create the rules for the class with the students at the beginning of the school year. The importance in this is that the player, namely the student, is a part of the rule system of the game on the whole.

It is also suggested by Dörnyei (2001: 62-66, 72-78) that giving the students more choice in general can increase their motivation and boost their learning. Motivation stems from multiple sources and it is commonly held that having a high motivation is the key to learning. Dörnyei and Ushioda (2001: 92-97) suggest that there are five situational categories of motivation: interest, future self-guides, motivational task processing and motivational flow. Interest is essentially how pleasant engaging in a certain activity is perceived to be, future self-guide encompasses feelings and thoughts of what one is and can become, motivational task processing is evaluation of how well the person is performing at the task and modifying actions when necessary, and flow, as stated before, is a form of concentration and involvement.

In terms of video games, the idea is that when students are given the possibility to choose, they will most likely choose material they are interested in. The variety of games is extensive and games usually allow the player to make changes within the game itself (level of difficulty, activity). Moreover, video games are very popular amongst young people and the general interest can be presumed to be quite high. Additionally, when engaging in the world of video games, the player becomes someone else. The player is constantly becoming a hero in another world and achieving feats that could be considered impossible. These experiences are often very positive and may boost self-image. To achieve the various feats, the player will also face many difficulties and they will have to modify their behaviour. In almost all games, it is necessary to employ different strategies and failure is often encouraged. In the context of games, this type of evaluation is often fun and can lead to flow experiences. When engaged in an activity that requires a certain amount of skill, flow state can be reached. Flow experiences are extremely valuable as they can keep activities enjoyable,

interesting and fun. As such, it would be quite ideal to have them in the classroom setting; however, it would seem that the requirements to reach this state can rarely be fulfilled in school. This may be due to some of the material used at school not being relatable to the students, the lack of interaction or a number of other reasons. What is of interest, however is that video games offer a high chance for a flow experience, provided that the game is well-designed and appropriate to the player's preferences (Cowley et al. 2008).

3   THE PRESENT STUDY

Piirainen-Marsh and Tainio (2009) state that there is a lack of empirical data on the effects of gaming on language learning as a whole. However, it is also said that boys play video games more than girls do hence there is an even bigger lack of empirical data on girls. This lack is rather surprising considering the high number of girls who report to play video games (Karvinen and Mäyrä 2011) as well as the fact that video games have been found to have considerably positive effects on various forms of learning. The present study was conducted in the University of Jyväskylä in the form of a questionnaire that was distributed through the e-mail lists of a number of faculties. The participants were females aged 18 years and older. The purpose of the study is to see what types of games girls prefer, how much they play and whether they find games useful, among other themes further explained in their respective sections. Positive results could be used to suggest or rather encourage changes in the Finnish education system to bring this often overlooked media (Leppänen 2007) to schools.

3.1   The aim of the study

The present study aims to discover how girls' view of playing video games has affected their English skills. The study itself was conducted in the form of a questionnaire and it employed both quantitative and qualitative methods. Both approaches come out in the questionnaire as it consists of four multiple choice questions and seven open-ended questions. Despite the fact that there were fewer multiple choice questions than open-ended questions, the main emphasis of the questionnaire is on the quantitative approach and the number of replies is considered more important than the depth of the answers given. The aim is also to make some suggestions about the English learning

capabilities of girls in terms of playing video games as well as their attitudes concerning the differences between female and male players. As the number of participants reached almost a hundred, perhaps some tentative suggestions can be made. However, it is worthwhile to note that the majority of the participants, and quite possibly all of them, are Finnish. It can be said that the study focuses on the view of Finnish girls, and therefore, can only be used to make suggestions concerning Finnish girls in particular. Nevertheless, the study can aid in understanding what kinds of games girls prefer to play, which kinds of games they find useful, how much time they spend playing, why they play and how all of this comes together to form an image of the learning of English the girls underwent while playing video games.

The main research question is: *What kinds of effects does playing video games have on the language learning of girls?* In order to provide an answer to this question, some sub-questions were created:

1. What kinds of games do girls play?
2. What kinds of games are thought to be useful, what kinds are not?
3. How often do girls play? Does this reflect on how meaningful or helpful gaming is conceived to be?
4. Does the faculty of the student reflect on her gaming habits and learning?
5. Do the girls feel there are differences between female and male gamers? If so, what?

First of all, knowing the types of games girls play can provide us with the information of which types of games are the most enjoyable. Secondly, knowing what kinds of games are preferred can indicate whether some games are thought to be more useful than others. This also relates to the previous point in that learning should be as much fun as possible and cater to the learner's interests in order to be efficient. Thirdly, having data on how much time a student should spend on playing to gain the benefits of English learning can be extremely important in the education setting. It is quite crucial to know how much time ought to be given to an activity in order for it to be successful. Fourthly, it could be useful to know whether students specialising in different subjects could all make use of learning through video games or whether some are more successful at it than others. There are various *learner types*, term used to describe the way in which a person learns the most efficiently, such as kinetic learner who learns the most efficiently by physically engaging in an activity. There are also aptitudes towards certain subjects that should be considered. Thus, acquiring data on the matter could be useful in education. Finally, knowing what differences girls feel there are between female and male players could ultimately explain the reasons boys seem to play more

than girls do. If playing video games is found useful, knowing the possible differences between the sexes could be used to encourage girls to play more often and, thus, learn more English.

3.2   Data and methods

The data for the present study was gathered between April and May 2013 in the form of an online questionnaire consisting of 11 questions. The questionnaire used in the study can be found in the Appendix A. Originally the intention was to distribute the questionnaire to upper secondary school students but due to difficulties with time management and permits, it was decided that it would be more convenient to distribute the questionnaire to university students through the university e-mail lists. Additionally, due to the number of students in the university, it was theorised to be a better way to acquire a sufficient quantity of replies. After the decision was made, the questionnaire was created on Freeonlinesurvey.com and the link was distributed to seven of the University of Jyväskylä's mailing lists. Some of these lists were directed at students of natural sciences such as biology, others were directed at languages and one was directed at a game studies and creation specialist list.

The questionnaire received 133 replies in total. However, a number of the participants only answered the first two questions. These participants were removed from the relevant questions to keep the results accurate. There were also 16 non-gamers whom have been excluded as well; it was found that they do not contribute to the research questions and would cause unnecessary inaccuracy. After these exclusions, a total of 82 participants could be considered. It should be further noted that these numbers still vary per question. The numbers of replies to a specific question are listed in the table in the results section where appropriate.

One of the points of interest of the study was whether the female students of different departments showed any variety in the questions. More specifically, the study was interested in whether their gaming habits, preferences and general learning experiences while playing were different from students of other departments. As roughly 70% out of the participants were humanists and, thus, it would be difficult to draw conclusions on whether there is a connection between the area of expertise and the English language skills the participants acquired from playing. However whereas the lack of variation is unfortunate, it does not hinder the study significantly.

The forming of the questionnaire took place rather rapidly; it was finished and tested in a matter of a couple of weeks. The questionnaire was piloted with three people and after studying the results, it

has been noted that further testing of the questionnaire would have been required. Moreover, it should have been tested on a wider audience as there were some unnecessary and ill-formed questions. For example, question number three inquiring whether the participant plays video games or not, as well as question number six concerning the reasons for not playing, are completely irrelevant to this study as the study's main focus is whether the participants learned English through playing. It was also found that question number ten should have been reformed as it was vague and misguided the replies of at least some of the participants. It should have been made clear that the questionnaire was inquiring about positive effects on the participants' English grades, not negative. The rest of the questions concern the age, faculty, gaming preferences and gaming habits of the participants, as well as their opinions dealing with the effects on their learning and whether they feel there is a difference between the sexes in terms of gaming. All of the open-ended questions provided an unlimited space for answers, allowing the participants to write as much as they would like, although the questions typically included a request to keep the answers brief. The questions themselves were in Finnish, despite the fact that university students would be capable of answering such a questionnaire in English, Finnish was decided upon to allow the participants to express themselves in the language presumed to be their mother tongue.

One of the reasons a questionnaire was chosen is because of its straightforward nature and consistency. The researcher does not have to spend time on choosing and mastering equipment that would be required for an interview. There is also less concern over technical failures of said equipment. The frames of the questions are more specific in a questionnaire than they would be in an interview as they cannot be modified later on. There is a clear pattern to follow and getting side-tracked is more difficult than in an interview. Additionally, interviews are one form of communication and it is important that both the interviewer and the interviewee are relaxed. However, at the same time, the interviewer has to maintain a certain distance in order to ensure the objectivity of the results (Dufva 2011: 138-145). In questionnaires, there is no interaction required and the level of objectivity is higher (Alanen 2011: 146-154). On the one hand, the amount of time spent on an interview would be much greater as it would take longer to process. On the other hand, having the questions in the form of a questionnaire allowed the participants to spend as much time answering as they liked. It would have been preferable to use both interviewing and a questionnaire to gain the best information, however, the framework of a bachelor's thesis does not allow for such a large amount of work to be done. Thus, it was decided that a questionnaire with some open-ended questions would be a reasonable compromise.

Other reasons for selecting the question types are that the open-ended questions guarantee the participants will be able to express their opinions freely whereas the multiple choice questions lessen the work load of the researcher (Alanen 2011: 151). Only questions with simple one-word answers were kept as multiple choice questions and, in retrospect, the second question could have been a multiple choice question as well. However, out of the open-ended questions, some are so only for the sake of convenience. For example, question five concerning the memorable game list is still a list and is also dealt with as such. The games are put into categories based on their genres and conclusions are drawn from them on the basis of statistics. In this way, the study takes on a much more quantitative approach than qualitative. The research questions focus on a bigger picture and seek to answer how gaming affects girls in general, and in order to achieve this, a large number of replies are required and they are dealt with as numbers rather than specific individuals. For this kind of approach, a questionnaire is better suited for the purpose. Additionally, some may consider interviews to be too personal and have difficulties giving honest answers. Even though in both methods the answers are handled anonymously, the questionnaire is more anonymous as the researcher does not meet the interviewees and, thus, does not know of all who provided answers. On the whole, the main reason the questionnaire was chosen is because it allows for better information gathering on a large scale, takes less time and might be more easily approachable to some participants.

3.3   Methods of analysis

The results of each question were categorised and listed as quantitative data. Essentially the purpose was to put the data into a form that makes it possible to create a list. In order to do this, the results were initially read through several times to form an overall view of the themes present. Afterwards the results were recorded on a Microsoft Excel template to ease the process of counting frequencies. This was more straightforward in some questions than others. For example, the majority of the questions yielded answers consisting of one word or a list of items. In these cases, it was easy to count the occurrences of individual words and then divide them into themes. In other questions, the answers were longer and more difficult to interpret. However, there were very few items that could not fit under the specific themes set for the question. Once the interpretation and categorisation of the data had been completed, the items under each category were counted and marked down under frequency of occurrence. Some of the numbers were further processed into percentages based on the

number of replies the question received. Once the categories and maths were finished, the results were translated into tables and the methods particular to the specific question were described.

The reason for categorising the results, counting the frequencies and then further translating them into percentages is to clarify the results as well as to save space and time. It would be unreasonable to attempt to write the results of a study with so many participants with the amount of time and space available. Additionally, it would cause the results to be difficult and slow to grasp as well as force the reader to do excessive amount of reading and memorising. Thus, the data was listed into tables and explanations for all the categories as well as the meanings of the data were included to aid the reader. Moreover, the protocols used in the study made comparing the results with one another and processing them much more convenient than other methods would have.

4 GIRLS' THOUGHTS ON LEARNING ENGLISH FROM VIDEO GAMES

4.1 The player data

The data listed in table 1 focuses on the participants' background information: their age, their department at the university and whether they play video games or not. About half of the participants were between 18-22-years-old and the majority of all the participants were humanists.

Table 1. Participant background information.

Ages	Frequency	Percentage	Department Frequency		Percentage	Do you play video games?	Frequency	Percentage
18-22	42	51.2%	**Humanist**	56	68.3%	**Yes**	82	83.7%
23-27	31	37.8%	**Social sciences**	20	24.4%	**No**	16	16.3%
28+	9	11%	**Pedagogy**	2	2.4%			
			Psychology	2	2.4%			
			Information technology	1	1.2%			
			Science	1	1.2%			
Total	81	100 %	**Total**	82	99.9%	**Total**	98	100 %

Unfortunately, due to the fact the majority of the participants were humanists, it would be difficult to make meaningful connections between the personal data and the player data based on the department of the participants. Whereas the present study as a whole can be used to make some tentative suggestions about the learning of English through video games has yielded, it mostly applies to girls studying subjects in the humanist department. It may have been more meaningful to inquire as to which subject the students study at the university and draw conclusions based on the differences between language students and students of other subjects. Additionally, it should be noted that the question concerning whether the participants play video games or not was unnecessary.

Table 2 includes the player data. This encompasses the age at which the participants started playing video games, the number of hours spent on playing on a weekly basis and finally, what language the games are played in. Roughly half of the participants play regularly and the majority of the participants started playing when they were in primary school. Practically all of the participants play games in English. In other words, most of the participants have roughly a decade worth of experience in English video games.

Table 2. Player data.

* = Participants might not play at all some weeks, but might play over 40 hours a week on others.

** = Participants in this category either used to play video games before or currently do not.

Hours per week	Frequency	Percentage	Age started at	Frequency	Percentage	Language played in	Frequency	Percentage
1-10	31	37.8%	**3-6**	18	22 %	**English only**	58	71.6%
0-x*	28	34.1%	**7-12**	57	69.5%	**Finnish and English**	14	17.3%
0**	15	18.3%	**13+**	6	7.3%	**Finnish, English + other**	8	9.9%
20-40	4	4.9%	**Not sure**	1	1.2%	**Finnish only**	1	1.2%
11-20	4	4.9%						
Total	82	100%	**Total**	82	100 %	**Total**	81	100 %

Nearly half of the participants reported playing occasionally. In all of the age groups, there were participants who did not play regularly. The results seem to coincide with Karvinen and Mäyrä (Pelaajabarometri 2011) in that women seem to play less after a certain age. The majority of the

participants over 23 years of age played irregularly or less than ten hours a week. The participants who were 28-year-old or older had a tendency to play less than two hours a week. However, what is interesting is that there were some participants who stated they used to play more when they were younger as well as participants who reported to not play on a regular basis because they do not have the time to. Even amongst the younger participants, some stated the time spent on playing varies. Considering the results and specifically the comments made by a number of participants, it would have been useful to include a question concerning the reasons for playing a certain amount of time per week. It might also have been better to ask the participants how much time is spent on playing video games on average per month rather than per week as some commented it was difficult to consider how much time was spent on gaming per week. Thus, changing the time period to a month may have made it easier for the participants to evaluate their game time.

In terms of the language the participants most played in, English was clearly the most frequent item listed. There were some cases in which other language combinations were listed as shown in table 2. However, what should be noted about the combinations is that languages other than English were rarely chosen even amongst them. The participants reported playing in Finnish, German, Swedish or Japanese occasionally and if they could. As stated by Leppänen (2007), the majority of video games have English audio and subtitles rather than other languages. Thus, the choice is not often available.

4.2   The effects video games are felt to have

The results concerning the effects the participants felt the games had on them are listed in table 3. 57 out of 70 participants that replied to the question felt that playing video games has improved their language skills.

Table 3. Whether girls felt their English skills improved due to playing their chosen games or not.

Has gaming affected English skills?	Number of replies	Percentage
Yes	57	81.4%
No	13	18.6%
Total	70	100 %

The majority clearly feels that playing the video games they listed as meaningful improved their language skills as demonstrated in table 3. Moreover, these improvements were felt to have taken place on multiple areas of language, as shown below in table 4. It ought to be noted that most of the

participants chose a number of areas of improvement rather than only one. Most of the categories are quite self-explanatory. Vocabulary focuses on new words learned, reading comprehension focuses on understanding written text and so forth. The more nebulous categories present in the list are word/letter recognition, general skills and reading skills. Word/letter recognition refers to the ability to recognise the written form of words and letters based on hearing, general skills refers to the basics of a language, and reading skills refers to skills such as determining the meaning of a given word by the context and understanding information that is not explicitly stated.

Table 4. The areas of language affected took place

* = Possibly has affected but participant is not certain.

Area of language	Frequency								
Vocabulary	52	All	4	Writing	3	Creativity	2	Reading skills	1
Reading comprehension	27	Syntax	4	Dialects and accents	2	Familiarised with language	1	Total replies 61	
Listening comprehension	24	Grammar	3	General skills	2	No effects	1		
Pronunciation	9	Word/letter recognition	3	Phrases	2	Not sure*	1		

The participants were requested to further explain the reasons they felt video games had improved that particular area of language. These explanations were divided into four different categories based on their main functions and they are listed in table 5. The *compulsory aspect* includes reasons that required the participants to understand English, input refers to the language provided by the game, output encompasses the language produced by the participant, and finally, the methods category has a list of the ways the participants thought they learned. It is important to note, however, that the majority of the participants reported reasons for learning rather than ways for learning. It should be further noted that the reasons for learning and the methods for learning correlate to an extent. For example, whereas the fact that games are mostly made in English is placed under the compulsory category; it could as well be placed under the methods category as immersing oneself in a language is arguably one of the best ways to learn it.

Table 5. Areas language improvement took place in and how.

Areas of improvement	Frequency	Input		Output		Methods	
Compulsory	44	**Input**	24	**Output**	13	**Methods**	23
Must	17	Amount of material to read	10	Being active	10	Repetition	9
Specific vocabulary	14	Voiceacting	10	Communication	3	Vocabulary	6
Games in English	11	Natural language	2			Trial and error	4
Importance/desire to understand	3	Menus	2			Translation	3
						Taught by someone	1
						Total replies	59

The most common reason stated for learning was the compulsory aspect present in many games. Most games are made in English and they always have a specific goal, with few exceptions. Along with this goal, a game usually has a story aspect to it or at the very least; it will have some instructions for the player to follow (Cowley et al. 2008). In games such as *Dance Dance Revolution*, where the player is required to press arrow panels on the dance platform of the console as they come up on the game screen, the player most likely can play the game without any further instructions from the game. However, it may be difficult for a player unfamiliar with English to navigate the game menus to choose specific songs or even quit the game. This requirement to understand the language of the game in order to play is referred to as the compulsory aspect in the present study. The desire to "get the most out of the game" is also included in this category because understanding the language is still compulsory in order to achieve this. The compulsory aspect encouraged the participants to learn English and use various methods to find out the meaning of words and phrases (trial and error, dictionary, asking, internet tips and deduction).

The second most common reason was the sheer amount of input provided by games. Most games provide text in various forms such as dialogue, menus and spoken texts. In relation to this category, the participants had a tendency to list vocabulary, reading comprehension as well as listening comprehension as the areas they improved upon the most. Pronunciation was also very prominent in this group.

The third category that describes the reasons for learning English was the amount of output. In this category, the participants stated that due to the interaction required by the game, they would often type or talk in English (voice chat) with other players. Often singleplayer games would also require the player to enter a command for the player's character to perform. In both cases, the output has to be recognisable, either by the other players or the game system.

Lastly, the most popular method for learning was repetition provided by the game. What is interesting here is that vocabulary seems to be the key in this category. Not only was it listed as one of the most popular methods, it is also present in repetition as repetition in games often focuses on specific phrases and words. It is also present in the other categories as translation, choosing actions in game to see what happens, and even being taught the meaning by someone are all actions taken to acquire a broader vocabulary.

Interestingly, whereas the majority of the participants felt that playing video games improved their English skills, over half of them felt that this improvement did not extend to their grades, as demonstrated in table 6. The difference in numbers can be considered quite significant as nearly the same number of participants who rated video games as having been beneficial to their learning (57) now rated that playing video games did not have an effect on their grades (41).

Table 6. Whether English grades improved or not.

Has gaming affected grades?	Frequency	Percentage
Yes	29	41.4%
No	41	58.6%
Total	70	100%

Part of the results can be attributed to a poorly laid out question. Question number ten was ambiguous in nature and may have led some of the participants to interpret it as a negative effect which was not intended. The questionnaire was concerned with the possible positive effects video gaming may have had on their grades and specifically their language grades, not their grades as a whole. This was also not apparent in the questionnaire. Thus, the results on the participants' grades can be considered to be ambiguous as well and cannot be properly interpreted. However, another possible explanation for the results may be that the participants felt they had not been able to employ their new language skills in a classroom environment as school often requires a specific type of vocabulary that might not be present in many games.

4.3 Reasons girls play video games and the most memorable games

In table 7, a list of the reasons the participants play video games can be found. Most of the participants chose multiple reasons for playing. Gaming was rated as a pleasant pastime by 52 participants out of 79. Additionally, it was found to be fun, relaxing and a good way to socialise.

When considering the data in table 2, it is interesting that despite the fact the majority of the participants enjoy various aspects of gaming, only about half of them play regularly. It is not certain what this is due to as the participants were not asked about the reasons they play a certain amount a week. However, as suggested before, the lack of playing on a weekly basis may be attributed to time issues.

Table 7. Reasons for playing video games.

* = Elements that did not fit into other categories (experimenting with games, safe environment to relieve aggression, and thought provoking).

Reasons for gaming	Frequency				
Recreation	52	Game world experiences	12	Learning	5
Gratification	23	Challenge and winning	8	Good games	3
Social aspects	17	Games addictive	7	Miscellaneous*	3
Relaxation	16	Hobby, related to hobbies	5	Total	79

Another point of interest is the amount of positive connotations video games have amongst the participants. In fact, the only category that can be considered negative is that games can be addictive. Seven out of 79 is not a very significant number, considering it is the only negative category. Based on the results, video games would be an excellent activity for students at schools as the positives outweigh the negatives in the feelings experienced during gameplay. Moreover, the variety in games is extensive. The participants of the present study alone named over 100 titles that were found meaningful. Due to the length of the table, it is listed in Appendix B. To aid understanding, a genre-based list was created and will be discussed instead.

For the sake of convenience, the titles in table 4 were divided into genres according to an international game store GameStop's categorisation. GameStop was chosen for the task due to it being one of the biggest and most widely used game stores available at the moment. There were, however, some disagreements on the categorisation of some titles, such as *Amnesia: The Dark Descent* which was listed as action horror on GameStop's website in September 2013 despite the fact it is listed as survival horror on the game's official website. It would have been nonsensical to manually visit over 100 websites to ensure the categorisation was in accordance with the official sources. Therefore, it should be kept in mind that the categorisation is simply GameStop's view. In order to make the interpretation of the table easier, the subcategories of various genres have been placed under one main genre where appropriate in table 8.

Table 8. Games categorised into genres.

* = Massively Multiplayer Online Roleplaying Game.

** = Games that could not be categorised as they are unavailable in GameStop's database.

Genres	Frequency						
Action total	126	**Sports total**	18	**Adventure total**	4	**Misc****	5
Adventure	75	Racing	10	Adventure	2	Blade Runner	1
Action	32	Sports	5	Graphic adventure	2	Kellog's game	1
Platform	14	Skating	1	**Platform**	3	Kula World	1
Horror	4	Snowboaring	1	**Music Party**	3	Manu ja Matti 2	1
Strategy	1	Wrestling	1	**Educational**	1	Nintendo	1
Roleplaying total	59	**Shooter**	12	**Maze strategy**	1	**Total replies**	70
Roleplaying	52	**Puzzle, Cards**	9	**Survival Horror**	1		
MMORPG*	7	**Strategy**	7				
Simulation	36	**Fighting**	6				

Roleplaying and adventure games were the most popular while war, fighting and sport games were rather popular as well. When comparing the results with the research by Phan et al. (2012), the preferences of the participants of the present study seem to follow a pattern of preference attributed to men much more closely than that of women. The genre on Phan et al.'s (2012) list of genres women prefer to play with the most hits in the present study is simulation (36 hits). However, the most popular genres are action (126 hits) and roleplaying (59 hits), which are listed as genres men prefer to play in Phan et al.'s (2012) study. On the one hand, the differences between the studies may be due to differences in genre classifications or cultural differences that might encourage the playing of some genres more than others. On the other hand, it may be that men and women prefer similar games after all.

4.4 Differences between female and male players

Table 9 presents a list of the differences and similarities between female and male players perceived by the participants. Quite a few participants listed several differences. The replies were put into three categories: what was said about men, women and both genders. Overall, men were perceived to play more, prefer different genres, have different attitudes concerning playing as well as other players (especially women), and they were also considered to be more accepted as players of video games than girls. On the other hand, 20 out of 66 participants felt that there are individual differences rather than differences based on gender.

Table 9. Differences and similarities between female and male players.

* = have been playing since younger age, playing is in blood.

Men	Frequency	Women	Frequency	General	Frequency
Play more	26	Prejudice, harassment, belittlement, discrimination	19	Different genres	28
More hardcore	9	Not/less socially acceptable	5	Differences individual	20
Directed at	7	Social	4	Don't know	6
Socially acceptable	6	Complete games	3	Interests	4
Social	6	Feelings, empathy	1	Aggressive	2
Complete games	1	Real life	1	Different challenges	1
Play in English	1	Tolerant	1	Humour	1
No/less feelings, empathy	1				
Natural*	1				
Total replies	66				

Men were thought to play longer in single sessions and more often. Their gaming was also suggested to be more regular than that of women's by some participants. They were considered to be more *hardcore players* (frequent, devoted, more complicated games) than women, who were considered to be *casual players* (less frequent, less committed, games easier to learn). Additionally, several participants had observed that men play games differently. They are more focused on simply playing the game and competing against other players, paying less attention to the story and the general game world. Six participants had also observed that men's gaming has a deeper social dimension than women's. Men often play together whether it is either physically being in the same room (*LAN parties* where multiple players play together in the same room) or online with friends, guilds or the like. However, four participants thought women require a game to have a social aspect to play at all.

It was suggested that this may be due to the fact that men and women prefer different types of games. Quite a large portion of the participants thought that women rather play party games, roleplaying games and adventure games whereas men were thought to prefer strategy-based games, war and fighting games as well as various sport games. As could be seen in the preferred genres list in table 4, the division is not so simple. Adams (2009: 619-628) devoted an entire chapter to how the preferences of women differ from those of men in terms of video games, listing not only his views but also those of other experts; Phan et al.(2012) studied the preferences of men and women and Piirainen-Marsh and Tainio (2009) had no female subjects in their study because girls do not play video games much. It is quite apparent that there are stereotypes about the types of games men

and women play, and considering the data used in the present study as well as the results, it would seem these stereotypes are largely unfounded.

The women felt that they faced more criticism for playing video games than men, especially if they preferred games that had been labelled as men's games. Moreover, gaming was considered to be more socially acceptable to men. Six participants specifically stated that men's gaming is more socially acceptable and five rated women's gaming as less socially acceptable than men's, which makes up for a total of 11 participants out of 66 who felt women's gaming was less acceptable. Moreover, 19 participants reported having faced sexual harassment, discrimination, insults and general mistreatment due to their gender. What often followed was a type of exclusion from the game community, as the following statement by a participant demonstrates: "vaikka uskon, että oot hyvä tankki, en ikinä haluis sun tankkivan mulle, koska oot tyttö" (= even though I believe that you're a good tank, I'd never want you to tank for me because you're a girl). Note that tank refers to a player whose task is to hold the enemy's attention while other players kill them. In some cases, the attention given to the participants was considered to be too positive in nature, often not relating to the game itself and, thus, being a distraction.

On the one hand, quite a large number of participants stated that there are no differences between female and male players. It was thought that whatever differences there may be, they have to do with the individuals' personality rather than their gender. On the other hand, some participants were not sure whether there were any differences, what those differences might be or why they would exist. In cases such as these, it was often stated that the participant had likeminded friends, had no female friends who played video games or simply had never thought about the possible differences or paid attention to them. Table 10 lists some of the reasons although it is not an exhaustive list as few participants listed reasons. The participants who did name a specific reason often named multiple ones.

Table 10. Reasons for differences.

Reasons	Frequency	
Society	6	**Other suggestions**
Interests	4	Addiction
Upbringing	4	Advantages, money
Culture	2	Categorisation artificial
Different challenges	1	Easier access
		Socialisation
		Social pressure
Total replies	66	Start earlier

The reason there were so few items listed may be due to the reasons for the differences being interwoven with the differences. For example, men were said to play more and from a younger age because it is more acceptable for them to do so by society, and because they play more, video games tend to be catered for men rather than women. The video game industry is also male dominated which leads to certain types of games being made, often hypersexualised and more brutal (Adams 2009: 619-628), and these games tend to interest men more than women. Other reasons were that men play more and start younger. As a result, men also have more social pressure to play as video games are a common topic amongst men. If a man does not play video games, there might be a degree of exclusion involved as there would be nothing to contribute to conversations dealing with video games. Thus, one of the reasons men are seen as more social video game players might be due to the pressure to play games in the first place. Additionally, they are also advertised for men rather than women. In other words, the differences and reasons are considered to have a very high correlation that leads to a vicious cycle where one element causes the emergence of another and then feeds it. However, the question had multiple sub-questions within it in the questionnaire, which may have led to the participants simply forgetting to list the reasons for the differences.

4.5 Summary

The participants felt that playing video games has boosted various areas of their language skills. Gaming was considered to be pleasant and video games were clearly thought of as a good reason to learn English as the most popular driving force was the compulsory aspect present in video games. However, there was some disparity between these boosts and the participants' grades, which may be due to the ambiguity of the question concerning grades.

The majority of the participants also felt that there were differences between male and female players. There was no significant number of replies for the causes. However, the few replies that were received suggested that the reasons are due to external sources such as upbringing rather than innate differences in men and women. The comparison between the study by Phan et al. (2012) and the present study also suggested that there may be some quite commonly held stereotypes that are not actually true.

5   CONCLUSION

The present study aimed to discover whether women learn English by playing video games or not, what areas these improvements take place in and what the reasons for gaming and the improvements on English skills are perceived to be. Additionally, the study was interested in women's gaming habits and the types of games they play, as well as whether the participants have perceived differences between female and male players. It was decided that the most efficient way to gather data on these factors would be to form a questionnaire and distribute it to female university students. Once the data had been gathered, it was processed into themes and translated into figures and tables.

The results show that girls learn various English skills by playing video games. The participants felt their vocabulary was the most affected area of language, although other areas were thought to have improved as well. Video games were found to have an extensive amount of specific vocabulary such as the names of armour parts which might not be encountered at school. However, it was not clear whether these improvements extend to the participants' grades or not, due to the ambiguity of the question. As such, grades received at school may not be the best indicator of language learnt by playing video games.

It is also suggested that whereas the participants perceived there to be differences between female and male players, at least the theory concerning the genre stereotype might not be as profound as has been suggested in some previous studies. It was found that most of the participants did not tend to play frequently despite the fact that the attitudes and reasons for playing video games were almost completely positive. There was no question in the questionnaire concerning the reasons, but some participants stated they played more when they were younger and others stated they do not

have the time to play at times. It is also possible that the reasons for not playing frequently have to do with the differences the participants perceived to be between female and male players as female players were considered to be treated badly.

The key strength of the present study was that it was clearly interesting to many participants as many students took the time to reply to it. Many of the researchers who were cited in the present study also stated that there is not much data on female gamers. However, the number of replies suggests that it may be viable to use female subjects in studies in the future. The study did have its pitfalls as well. Most of the problems had to do with the questionnaire. Some questions should have either been left out completely or rephrased. Another problem with the questionnaire may have been the number of open questions that made it slow to process, especially due to the large number of replies. Some questions should have also been divided into more questions to make it easier for the participants to keep track of what they were being asked.

On a more positive side, the present study offered a number of new areas to discover. The effects playing video games have on the language learning of girls as well as boys should be further studied with better formed questions. For example, whereas it is important to know how much time is spent on playing video games, it would also be good to know the reason this specific amount of time is spent. It would also be interesting to have participants with more varied backgrounds, such as different age groups, gender and favourite subjects at school. Furthermore, these effects should be tested without the focus being on the effects and grades perceived by the participants. The results would be useful in determining the differences between female and male players, which would make the use of video games in education easier. If views other than preferred genres are also found to be misleading, then perhaps it would be easier to create and assign games suitable and fun for both genders that could be used at school.

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Appendix A: The questionnaire

Kysely koskee videopelien pelaamisen **vaikutuksia tyttöjen englannin kielen oppimiseen**. Muistele omia pelikokemuksiasi ja mieti miten ne ovat vaikuttaneet kielitaitoosi.

1) Olen   18-22-vuotias

23-27-vuotias

28-vuotias tai vanhempi

2) Tiedekuntani on…

3) Pelaatko tai oletko pelannut videopelejä?
Kyllä
En

4) Kysymyksiä pelitottumuksistasi... a) Kuinka monta tuntia viikossa? b) Minkä ikäisenä aloitit? c) Millä kielellä pelaat yleensä? Miksi pelaat?

5) Nimeä muutama parhaiten mieleen painunutta tai eniten pelattua peliä (enintään 5).

a.	
b.	
c.	
d.	
e.	

6) Miksi et pelaa? (Vastaa vain, jos vastasit "en" kysymykseen 3)

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7) Koetko kyseisten pelien vaikuttaneen kielitaitoosi?
   Kyllä
   En

8) Kerro lyhyesti miten ne vaikuttivat kielitaitoosi (luetunymmärtäminen,
   kuullunymmärtäminen, puhuminen, kirjoittaminen tai joku alue näiden sisällä, esimerkiksi
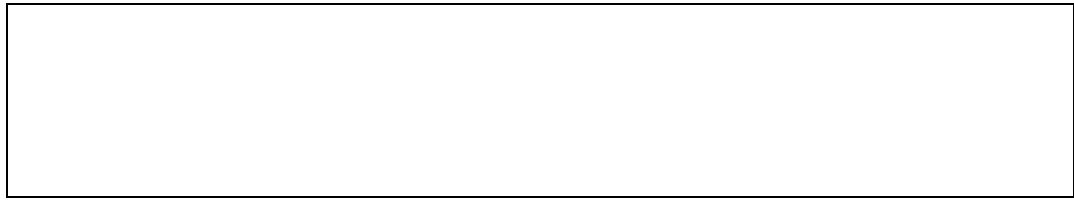   sanasto jne.)

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9) Perustele lyhyesti

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10) Onko pelaaminen mielestäsi heijastunut arvosanoihisi?
    Kyllä
    Ei

11) Onko sinun mielestäsi mies- ja naispuolisten pelaajien välillä eroja? Millaisia ja mieti, miten
    itse suhtaudut kyseisiin eroihin? Jos eroja on, mistä luulet niiden johtuvan?

Kiitos vastauksistasi!

Appendix B: The list of video games

Video game	Frequency	Video game	Frequency
The Sims	26	Harry Potter	1
Crash Bandicoot	21	Harvest Moon	1
Super Mario	15	Heavy Rain	1
Spyro	14	Hugo	1
Final Fantasy series	13	ICO	1
Pokemon	9	Killing Floor	1
The Elder Scrolls	8	Kellog's game	1
Sonic the hedgehog	7	Kingdoms of Amalur	1
Monkey Island	6	Kula world	1
Rayman	6	Lego Star Wars	1
Tomb Raider	6	Left 4 Dead	1
Tekken	5	Leisure Suit Larry	1
World of Warcraft	5	Little Big Adventure	1
Zelda	5	Longest Journey	1
Baldur's Gate	4	Lord of the Rings: Battle for Middle-Earth	1
Crash Bandicoot Racing	4	Lord of the Rings Online	1
Assassin's Creed	3	Mahjong	1
Jazz Jackrabbit	3	Marvel Ultimate Alliance	1
L.A. Noire	3	Mma/Wrestling	1
Portal	3	Manu ja Matti	1
Ratchet&Clank	3	Max Payne	1
Age of Empires	2	Metal Gear Solid	1
Buzz trivia	2	Mortal Kombat	1
Disney games	2	Nintendo**	1
Dragon Age	2	Paper Mario: The Thousand-Year Door	1
Fallout 3	2	Phantasy Star	1
Fifa	2	Prince of Persia	1
Grim Fandango	2	Professor Layton	1
Heroes of Might&Magic	2	Red Dead Redemption	1
Jack and Dexter	2	Shadow of the Colossus	1
Kingdom Hearts	2	SimSafari	1

King's Quest	2	**"Skeittauspelit" (= skating games)***	1
Mass Effect	2	**Star Wars Galaxies**	1
Modern Warfare	2	**Star Wars Battlefront**	1
Need for Speed	2	**Silent Hill**	1
Neverwinter Nights	2	**Sly**	1
NHL	2	**Sim City**	1
Persona	2	**Solitaire**	1
Phoenix Wright: Ace Attorney	2	**SSX**	1
"Rallipelit" (= Racing games)*	2	**Super Smash Brothers Brawl**	1
Resident Evil	2	**Syberia**	1
SingStar	2	**Tecmo cup soccer**	1
Tetris	2	**Theme Park**	1
Theme Hospital	2	**Theme Park World**	1
Alkupolku games	1	**Trine**	1
Amnesia: The Dark Descent	1	**Turtles 2**	1
Angry Birds	1	**Ty the tasmanian tiger**	1
Ape Escape	1	**Uncharted**	1
Batman Arkham	1	**Unreal Tournament**	1
Blackwell	1	**Wacky Wheels**	1
Blade Runner	1	**Worms**	1
Blues Brothers	1	**Zoo Tycoon**	1
Caesar	1		
Call of Duty	1		
Defense of Ancients 2	1		
Devil May Cry	1		
Dink Smallwood	1		
Diablo	1		
Doom	1		
Dyna Blaster	1		
Flight of the Amazon Queen	1		
Grandia	1		
Grand Theft Auto	1		
Guitar Hero	1		
Half-Life	1		
Halo	1		

Appendix 2. The games participants mentioned.

* = The symbols (=) mark for a translation.

** = Nintendo is most likely used to refer to the console to play games with. It is not a game itself.