

Video games in language learning:

The way to the next level of language competence?

BACHELOR'S THESIS

ARI-PEKKA VÄISÄNEN

University of Jyväskylä
Department of Languages
English
May 2014

JYVÄSKYLÄN YLIOPISTO

Tiedekunta – Faculty Humanistinen tiedekunta	Laitos – Department Kielten laitos
Tekijä – Author Ari-Pekka Väisänen	
Työn nimi – Title VIDEO GAMES IN LANGUAGE LEARNING The way to the next level of language competence?	
Oppiaine – Subject englanti	Työn laji – Level Kandidaatintutkielma
Aika – Month and year toukokuu 2014	Sivumäärä – Number of pages 21 sivua + 1 liite
Tiivistelmä – Abstract <p>Vaikka videopelit ilmiönä ovat olleet osa kulttuuriamme jo useiden vuosikymmenten ajan, niihin liittyvää tutkimusta on tehty varsin vähän. Lisäksi suurin osa olemassa olevasta, oppimiseen liittyvästä tutkimuksesta keskittyy teoriaan käytännön ilmiöiden tutkimisen sijaan. Varsinkin kielten oppimista käsittelevä tutkimus on vielä puutteellista. Videopelit mediana ovat kehittyneet paljon erityisesti 2000-luvulla ja niiden mahdollisuudet opetuksessa yleisesti tulisi kuitenkin selvittää.</p> <p>Tämän tutkielman lähtökohtana on tutkia yläkouluoppilaiden videopelaamisen määrän vaikutusta heidän englannin kielen taitoonsa, sekä eroja eri videopelityyppien pelaajien englannin taidossa. Tutkielmassa kielitaidon merkinä käytetään englannin kielen kouluarvosanaa. Tutkimuksen aineisto kerättiin kyselytutkimuksella, joka teetettiin kahdelle yläkoululuokalle keväällä 2014. Tutkielmaan osallistuneet ryhmät olivat yläkoulun 8. ja 9. luokalla ja he olivat opiskelleet englantia 6-7 vuoden ajan. Kyselyyn vastasi yhteensä 31 henkilöä. Tutkimuskysymykset koskivat oppilaiden harrastustottumuksia, erityisesti heidän videopelitottumuksiaan.</p> <p>Kyselyn pienestä otannasta johtuen tutkimuksen tulokset eivät ole tilastollisesti merkitseviä. Tästä huolimatta tulokset osoittavat, että yläkouluoppilaiden kielen keskiarvosanan ja videopelaamisen määrän välillä näyttää olevan positiivinen korrelaatio. Oppilailla jotka pelasivat ryhmän keskiarvoa enemmän videopelejä oli myös keskiarvoa korkeampi englannin arvosana, kun taas keskiarvoa vähemmän pelaavilla oppilailla oli keskiarvoa alhaisemmat arvosanat. Lisäksi eri videopelityyppien pelaajien välillä havaittiin eroja heidän englannin kielen arvosanassaan. Ainoastaan massiivimoninpelien ja roolipelien pelaajien arvosana oli kaikkien vastaajien keskiarvoa korkeampi.</p> <p>Vaikka tuloksia ei voidakaan yleistää koskemaan kaikkia oppilaita, kannustavat tulokset lisäämään videopelien ja pelillisten elementtien hyödyntämistä osana kielten opetusta. Nykyään oppilaita kehoitetaan käyttämään muun muassa elokuvia ja TV-sarjoja, kirjoja ja muuta mediaa kielitaitojensa kehittämiseksi. Myös videopelien mahdollisuudet opettamisen ja oppimisen kannalta tulisi tiedostaa tulevaisuudessa paremmin.</p>	
Asiasanat – Keywords video games, language learning, video game types, questionnaire	
Säilytyspaikka – Depository JYX	
Muita tietoja – Additional information	

TABLE OF CONTENTS

1	INTRODUCTION.....	3
2	VIDEO GAMES IN LANGUAGE LEARNING AND TEACHING.....	4
2.1	Video games as cultural phenomenon.....	4
2.2	Video games as tools for language learning and teaching	5
2.3	Language of video games.....	6
2.4	Benefits of video games for language learning in Finland.....	7
3	PRESENT STUDY.....	9
3.1	Research questions	9
3.2	Research participants and data collection	9
3.3	Methods of data analysis	10
4	ANALYSIS AND RESULTS	12
4.1	Video games and their relation with students' English skills	12
4.2	Different types of video games and their relation with students' English skills.....	14
4.3	Other findings.....	16
5	CONCLUSION	18
	BIBLIOGRAPHY	20
	APPENDIX 1: THE QUESTIONNAIRE.....	22

1 INTRODUCTION

Video games nowadays can be more than mindless entertainment. They can be used to tell meaningful, fleshed-out stories and to discuss even complicated ideas and issues. Hauso (2014) writes about a Norwegian school where the video game *The Walking Dead* is used as part of a teacher's ethics and moral teaching. Video games are not just a children's media anymore. According to Entertainment Software Rating Board (2013) the average video game player is 34 years old. Video games can very well be a viable form of media for people to use as part of their language learning process and for learning in general.

However, the potential of video games for teaching has not been researched in much detail. Existing research into video games for learning has largely been based on theoretical ideas instead of looking into practical issues. Furthermore, there is not much research into video games as part of language learning. Their potential has been discussed but again, practical research is scarce.

The present study will look into the effects commercial video games have on Finnish secondary school students' English competence. The study will ignore video games developed for educational purposes and therefore the terms 'video game', 'commercial video game' and 'entertainment video game' are used to refer to the same type of video game, unless otherwise mentioned. The study will also look into whether or not there are differences between the players of specific video game types. For the research, a questionnaire was given to a number of secondary school students. The students were asked about their free-time activities and their contact with the English language, with most of the concentration put onto video games.

First, the present study will look into video games as part of the human culture and research into video games for teaching. The possibilities of commercial video games in the case of Finland, a non-English speaking country, will also be discussed. Second, the present study and its methodology including the research participants and data collection and analysis will be discussed in detail. Finally, the results and their implications will be presented and discussed. The effect of video game play and its amount on students' English language competence and the differences between different video game types, or genres, will be discussed in detail.

2 VIDEO GAMES IN FOREIGN LANGUAGE LEARNING AND TEACHING

The present chapter will concentrate on video games and their uses in foreign language learning and teaching. First, video games and their popularity and recognition as pastime activities will be discussed briefly. Second, video games and their uses in foreign language learning in general will be looked into. Third, the kind of language that video games use and its implications will be analysed. Finally, the benefits of video games for foreign language learning in Finland will be discussed.

2.1 Video games as a cultural phenomenon

Games have been a part of the human culture for centuries. In the last couple of decades video games have become an increasingly important type of play alongside traditional forms, such as sports and board games. The video games industry itself has grown over time to challenge the older film and music industries. According to Bronkhorst (2013), the film industry still generates more annual revenue than the games industry does. However, as Kain (2013) reports, some singular video game releases in the recent years have become the biggest entertainment launches in history. He reports that Grand Theft Auto V recently became the fastest entertainment release in history to reach \$1 billion in sales revenue by crossing the \$1 billion mark in just three days. He mentions that the game did not surpass only other video game releases but also the fastest grossing film releases. According to Kain (2013), The Avengers, Harry Potter and the Deathly Hallows Part 2 and Avatar, which are the fastest grossing film releases, crossed the \$1 billion mark in 19 days.

Video games are a common hobby for many people of different ages. According to the Entertainment Software Rating Board (2013) 67% of US households play video games and the average gamer spends eight hours a week playing video games. Video games also bring people together outside the games themselves. Players discuss and share their views on video game related issues both online and offline with other players. Numerous conventions centred on video games are held around the world each year, promoting future releases and trends of the industry and also bringing like-minded people together. The largest gaming conventions, such as BlizzCon and E3, gather tens or even hundreds of thousands of visitors, as Gamescom did in 2013 (Gamescom 2013). Video games are also increasingly popular as observed activities where the viewer does not actively take part in the gameplay. Online, the growth of online video streaming services such as YouTube, has led to growing interest in both producing and watching video game related videos. In fact, some

of the most popular YouTube channels today are primarily video game related. Dredge (2013) reports that musician Miley Cyrus' channel was recently surpassed as the channel with most subscriptions by the Swedish gamer PewDiePie's YouTube channel.

Professional, competitive video game play, also known as eSports, is also on the rise in popularity. A number of video game tournaments are held annually, often featuring live online broadcast of the competition and sizable cash prizes for successful competitors. Professional video game players are also beginning to be recognized as professional athletes. In fact, the USA has begun to grant foreign professional video game players the same P-1A visas as traditional athletes, as O'Neill (2013) reports. All this is an indication of the increasing public acceptance and popularity of video games as a form of entertainment.

2.2 Video games as tools for foreign language learning and teaching

As video games are such a large phenomenon and a common hobby among many, the potential and possible benefits for language learning and teaching should be assessed. In fact, recent years have seen a growing interest in video games as tools for teaching and learning in general. This can mean both using games as they are as a part of teaching and making use of different ideas related to game development in teaching. An excellent review of research, ideas and studies on the subject by Mitchell and Savill-Smith (2004) goes through various topics, including the possible benefits of video games and their existing uses in teaching. Some of the benefits they mention are the motivating nature of games and the fact that they can reduce the load on the human instructor. As for existing uses of games in teaching, they mention simulation games used for enhancing children's spatial abilities and administration skills for businessmen and strategy games for geography teaching (Mitchell and Savill-Smith 2004).

Making hobbies viable language learning tools would be a great help in the concept of lifelong learning, as hobbies take place mostly outside the school. Through hobbies, learning can continue even after a person's school education has ended. Hobbies are also good for implicit learning due to the fact that they are most often taken part in for reasons other than learning. Nevertheless, hobbies which provide significant language input can also benefit language learning while mainly providing entertainment and a sense of accomplishment. This can be seen in a study by Sundqvist (2009) as she found that Swedish ninth graders with more contact with English outside of school scored better in oral proficiency and vocabulary than those with less contact with English. It is therefore clear that exposure to a language outside of school definitely helps in language learning.

Reinders (2012) argues that research into game-based language learning and teaching is still in its infancy. As such, straightforward information on the benefits of video games as language learning and teaching tools is not readily available. Still, some pioneers in the field, like Gee (2003, 2007) argue that video games operate with good principles of learning and that they have potential as language learning tools. According to Gee (2007), good games get people to learn and to enjoy learning. In the context of games, learning the mechanics of the game is vital for the player so that he or she can finish the game successfully. Games that do not require learning and therefore are too easy do not hold the player's interest for long. Therefore it could be argued that good, commercially successful video games employ good principles of teaching. Some further clues into the possible benefits of video games themselves as tools for language learning specifically can be found in a study by Uuskoski (2011); Finnish high school students who spent more hours per week playing video games had on average higher English grades than those who spent less time playing video games.

2.3 Language of video games

A factor of the benefits of video games for foreign language learning is the amount of variety that exists between different video games. Naturally, different kinds of games use varying amounts and kinds of language. A role-playing game, which relies strongly on the story it tells and the characters it features, will often make use of more language than a racing game, for instance. Also, the language that a role-playing game uses is often more complex than that of a racing game.

Another cause for variance in the language of video games is the young, yet fast-growing mobile gaming sector. Newzoo (2013) reports that as the global video games market is expected to keep expanding over the next years, most noticeable growth in the future is expected from smartphone and tablet gaming markets. Mobile and browser games tend to concentrate on quicker playing sessions and as a side result often do not use as much language as traditional computer and console games. Instead, mobile games often make use of short visual animations and simple icons in order to explain the mechanics of the game as opposed to the language-based text or audio solutions that are often used in more traditional computer and console games.

Krashen's (1985) input hypothesis states that people acquire a second language by understanding language input that is just beyond their current level of competence. His idea of comprehensible input is often explained with the formula $i + 1$, where i stands for the learner's current level of competence and $i + 1$ stands for the level immediately after it. Therefore a learner of level i

progresses by understanding language which contains language of level $i + 1$ (Krashen 1985). Even though Krashen's theory has been subject to a number of criticisms, it gives us an insight into possible benefits of video games from a language learning perspective. They can provide a player suitable foreign language input for long periods of time.

As Gee (2003, 2007) argues, good video games keep players motivated to continue playing for a long period of time. Over a long period of time spent playing video games, a player is subjected to a sizeable amount of language input. If the language of the game is different from the player's first language, this input can be beneficial for the player's foreign language learning. However, different players have differing levels of language competence and different games provide different levels of language input. Consequently, it is possible that even if a student in secondary school can enjoy and play similar games as a high school student, he or she will not understand enough of the language used by the game for his or her language competence to improve significantly.

2.4 Benefits of video games for language learning in Finland

Finland is a bilingual country with two official languages; the more common Finnish and the less common Swedish. These two languages are learnt by all Finnish students, regardless of their first language. However, the vast majority of students also learn other foreign languages, such as English, German or Russian with English being the most common foreign language studied. According to Leppänen et al. (2011), more than four out of five Finns have studied English.

Video games can be an excellent source of English language input for people in Finland, including students. This is due to the fact that much of foreign media, including video games, is not dubbed in Finland. Instead, most of foreign media is subtitled into Finnish with the original language audio still retained. Furthermore, often in the case of video games the subtitles themselves are also in the original language of the game and not in Finnish. In Finland, the language of most foreign entertainment releases, video games included, is English. A noticeably smaller number of video games are available also in other European languages such as French, German or Swedish. A number of games, often aimed at children, may feature Finnish subtitles or even dubbed audio. Also, Crystal (2001) shows that English is the dominant language on the global Internet. As such, the English language is also used as a lingua franca for communicating in online games between players of multiple nationalities. Therefore, for a Finnish person video games as a hobby are not only a good source for language input but also a possibility for language output in English. Even if

a video game itself does not offer the player a chance to produce language, the broader culture surrounding video games certainly does.

Nevertheless, more research into the benefits of video games on language learning is necessary. Much of the previous research has concentrated on theoretical issues and ideas whereas research rooted in practice is not readily available. Uuskoski (2011) studied students in high school, where students are nearing the end of their compulsory English learning and therefore have a higher skill level than students in lower levels of the educational system. Thus, his findings concerning commercial video games may not apply in the context of younger students at lower levels of education. While educational games aimed at a specific target group have their language input and exercises tuned to match the skill level of that target group, video games developed for entertainment purposes may not do so to a similar degree.

Research into Finnish secondary school students' video game play and its relation to their English language skills has not been conducted previously. While it has been suggested that Finnish high school students who play more video games have on average a higher English grade, the same may not apply to secondary school students, who generally have a lower level of English language competence. As explained above, a secondary school student may be able to enjoy the same games as a high school student but he or she may not necessarily be subjected to suitable foreign language input during play. This, in turn, would not lead to an improvement in the student's foreign language skills. The present study will look into whether and in what way the amount of video game play affects Finnish secondary school students' English language skills.

3 PRESENT STUDY

The present chapter will introduce the research questions, followed by the research participants and methods of data collection. Finally, methods used in data analysis will be presented.

3.1 Research questions

The present study aims to find out if there is a correlation between the amount of time Finnish secondary school students spend playing entertainment video games weekly and their language competence in English. Larger amounts of video game play mean larger amounts of foreign language input the playing student is subjected to. The study will look into whether or not more language input exposure through video games predicts an improvement in the student's language competence.

The study will also attempt to acknowledge the differing effect or the possible lack of effect that video games of different kinds and of different genres may have. However, the study will only concentrate on video games developed mainly for commercial and entertainment purposes and will not look into the effects of educational games. Therefore, in the study the terms entertainment video games and video games are considered one and the same, unless otherwise stated.

As such, the study seeks answers to the following questions:

- What is the connection between secondary school students' English language skills and the amount of time they spend playing video games per week?
- How do players of different kinds of video games differ in their foreign language skills?

3.2 Research participants and data collection

To answer the research questions, quantitative methods of research were employed. The participants of the present study were a group of secondary school students, consisting of two classes. One of the classes was on the eighth grade, while the other was on ninth grade. By collecting data from whole classes instead of choosing the participants individually, it could be assumed that the data included subjects with differing amounts of weekly video game play and English grades. At the time of data collection the students had studied English for six to seven years. Therefore, it was reasonable to assume that their English skills were at a level high enough for them to acquire

English through consumption of different forms of media and through other activities. Altogether, 31 people answered the survey. The survey in its entirety can be found in the appendix.

Data collection was done through a survey in order to most easily get the largest amount of data for statistical analysis. The first questions of the survey concerned the pastime activities of the students. The students were to tell how they spend their free time when they are not consciously studying by allocating hours into a number of pre-given, relatively broad hobby definitions, such as video games or arts. However, the students did also have the possibility of giving their own answers, such as mentioning a hobby not included in the survey. The amount of time spent on different hobbies was given as an average of hours per week, so that it was easier for the students to choose the amount of time they spend on activities that only take place during weekends, for example. In fact, had the options been hours per day, it would have been much more difficult for the students to estimate the time they spend on any hobby which they did not practise on every day of the week. In addition to video games, the survey covered a variety of different pastime activities not related to video games. This was done in order to be able to assess the possibility of activities other than video games factoring into the relation of video game play and a student's skills in English. However, since the main focus of the study was video games, there were further questions only regarding different genres of video games. In addition to hobbies, another factor that was taken into account in the survey was exposure to English through travelling to and living in English-speaking countries. Finally, the students gave their latest English grade.

3.3 Methods of data analysis

As the first part of data analysis, the validity of the collected data was verified. All data was looked through in order to exclude any data that was clearly unreasonable, questionable or if there were parts of the questionnaire that were not answered. For instance, if a student's answers led to an impossible total amount of hours, those answers were excluded from analysis. All valid data was then included in the statistical analysis.

Analysis of the data acquired from the survey compared students' time spent on the different hobbies and their English language grades to the average grade of all participants. In order to answer the first research question, the participants were grouped by their time spent on the hobbies. Then the average grades of the different groups were compared to the average grade of all students who participated in the survey. This made it possible to look for correlations and trends between the amount of time spent on hobbies and the English grades of the students.

To answer the second research question, all players of certain type of games were grouped together. Similarly to the first method of analysis, the average grade of the groups was compared with the average of all participants. This way the different video game types could be compared to each other to see if the players of a certain type of game have a higher average grade and some have a lower one.

4 ANALYSIS AND RESULTS

The data collected turned out to be rather varied and for the most part made analysis simple and easy. Most of the hobbies had all of their hour options chosen at least by one participant. Understandably, smaller and less common kinds of hobbies, such as arts were the ones not to have all their options chosen. An interesting exception to this was films and TV, which did not have any participant pick the option of over 15 hours per week. In fact, it was the least popular hobby after arts and reading and writing.

Altogether, English grades of the students who took part in the survey ranged from 7 to 10. That means that there was no sizeable variance in the average grades for different hobby groups. The average grade of all participants, which was used for comparison with the different hobbies, was 8.57, which seems relatively high.

4.1 Video games and their relation with students' English skills

In the case of video games, it can be seen that generally, the more time is spent on video games, the higher the average grade is. However, the results do not reach statistical significance, while a minor positive correlation was found through Pearson's correlation analysis ($r = .129$, $p > .01$). As can be seen from Table 1, the average grade of video game players rises with the amount of time spent on video games. The exception to this is the group of 10-14 hours which has an average that is noticeably lower than the average of all answerers. However, that specific group only consists of a single person, which could be the cause of the drop in the average grade. Otherwise the trend is positive in regards to time spent on video games and a student's English grade.

Table 1. Average English grade of different video game groups

Video games per week	Average English grade	N
Over 15 hours	9.00	4
10-14 hours	8.00	1
6-9 hours	8.60	10
3-5 hours	8.50	6
0-2 hours	8.44	9
Whole group	8.57	30

The two groups with the least amount of video game play also have an average English grade that is lower than the average of the whole group. The mean answer for time spent on video games stands between the options '3-5 hours' and '6-9 hours'. This is also the point at which the average English grade is bypassed by video game players. Therefore, it would appear then that those students who played less video games than the average also had a lower than average English grade and fared worse than their colleagues with more video game play. This and the slight positive correlation make it possible that an increase in video game play also leads to an increase in English language competence.

However, when we look into the answers for students' contact with the English language, video games do not fare as well as in correlation with the average grade. In fact, the group of students who picked video games as one of their connections with the English language have the lowest average grade of all pre-given options, which is shown in Table 2. Only travelling was connected to a lower average grade, which can be explained by the fact that only one student gave travelling as their own option. At the other end of the results stands the student-given option of family and friends with the highest average grade overall.

Table 2. Average English grade of different connections to English

Connection with English	Average English grade	N
Family and friends	9.33	3
Reading and writing	9.00	7
Arts	9.00	3
Sports	8.83	6
Films and TV	8.57	30
Music	8.54	28
Video games	8.47	19
Travelling	7.00	1
Whole group	8.57	30

It is difficult to explain the reasons for this discrepancy between the hours put into video games and the contact with English through video games. Some possible reasons may be deducted from the average grades of different video game types, which can be seen in the following section. Another

explanation could be the fact that not all video game players mentioned video games as one of their connections to the English language.

4.2 Different types of video games and their relation with students' English skills

When the students who said they play video games of a certain type are grouped together, it can be seen that only players of massively multiplayer online games, from here on simply MMO games, fare significantly better than what is the average of all answerers. In fact, MMO and role-playing games are the only two types of games the players of which have better than average grades in English. Players of browser and platform games all had an average grade much lower than the average of all answerers. Action, sports, music, shooter, racing and adventure game players had a slightly lower than average English grade. The average grades of the different video game player groups can be seen in Table 3. It should be noted that while the survey used for data collection lacked a pre-given option for sports games, a sizeable number of people gave it as their own answer. Therefore, sports games were also included in data analysis.

As mentioned in section 1.3, mobile and browser games (including games on Facebook) often use simpler icons instead of written and spoken language in order to explain the game to the player, which most likely factors into the lower average grades. However, platform games having the lowest grade of all game types is not as easily explained. Platform games often do not use much language but one could assume they would use more language than mobile and browser games, therefore also providing more language input to the player. However, it could be that since most platform games, such as the Mario games, are easy for even small children to pick up and understand, the language input of these games is not on a high enough level to improve secondary school students' English skills.

At the other end of the spectrum, a possible explanation for MMO and role-playing games having the highest average grades is the language of these types of games. Role-playing games focus significantly on the story they tell and the characters of the game. They often feature much dialogue and often let the player choose their own character's lines of dialogue from a number of options. Due to this the player has to concentrate on the language of the game in order to get the most out of the game. The majority of MMO games are in fact role-playing games which are played together with vast numbers of other people, although large scale shooters and other types of games are becoming more common in the MMO genre. While an MMO role-playing game may not place so much emphasis on the game's story and non-player characters as a single-player role-playing game,

the addition of other human players emphasizes communication between real people. In order to communicate inside the game, the players produce their own lines of dialogue themselves. Due to these characteristics, MMO and role-playing games both feature significant focus on language use.

Table 3. Average English grade of different video game types

Type of video game	Average English grade	N
MMO	9.00	4
Role-playing games	8.60	5
Action games	8.38	8
Sports games	8.38	8
Music games	8.33	3
Shooter games	8.30	10
Racing games	8.29	7
Adventure games	8.20	5
Mobile games	8.20	15
Browser-based games	8.00	2
Platform games	7.83	6
Whole group	8.57	30

While many other types of games feature long and varied stories and dialogue, they often do not place as much emphasis on it as MMO and role-playing games. For these games the emphasis is more on the player interacting with the game's world with the tools that the game gives. In order to get the most out of an action or a shooter game, for example, the player often does not necessarily have to understand the story or reasons for his or her actions. These sorts of games also often explain the player's objectives through much shorter and easily understood messages. This does not mean that only MMO and role-playing games can tell good stories but they do emphasise their stories a lot more.

The game types that had the lowest average grades are those which most often feature little to no story and dialogue, such as mobile and browser games. An exception to this are adventure games but their lower grades may be due to the difficulty of categorising video games in general. Video games often overlap in their genres and types. Many games, be it adventure or role-playing, feature

action elements in them. For the questionnaire, combining adventure and action games together could have been a good choice in order to reduce overlap between the game types. However, in that case older style point-and-click adventure games, which often do not have fast paced action elements in them would not have had a type to easily associate with.

4.3 Other hobbies

When the students' answers on the amount of time they spend on other hobbies are compared with their English grades, it can be seen that some hobbies other than video games also appear beneficial to a students' English grade. By analysing the correlation between a hobby and the grade, music and arts also show positive correlation coefficient. For music the coefficient was 0.230 and for arts it was 0.217. Films and TV, sports, and reading and writing show negative correlation. However, as with the correlation between video games and English grades, the data is not statistically significant. While video games did show positive correlation with students' grade, the correlation coefficient was not as high as it was for music and arts. However, for arts this correlation could be attributed, at least partially, to the way the answerers picked their hours for the hobby. Only one student, whose grade was 10, picked the option of over 15 hours for arts while all other students picked either 0-2 hours or 3-5 hours. This leads to a noticeable rise in the average grade of artists. The noticeably positive correlation of music is not as easy to explain, however. The average grades for music and arts can be seen in Table 4 and Table 5.

The negative correlation between the students' English grade and reading and writing seem peculiar. However, it may be that students write and read a lot more in Finnish than English, causing more reading and writing to lead to less time to spent using English. In fact, as Table 2 shows, when it comes to students' contact with English, reading and writing tied for the highest average English grade of all pre-given questionnaire options.

Table 4. Average English grade of different music groups

Music per week	Average English grade	N
Over 15 hours	9.00	7
10-14 hours	7.50	2
6-9 hours	9.60	5
3-5 hours	7.83	6
0-2 hours	8.40	10
All answerers	8.57	30

Table 5. Average English grade of different arts groups

Arts per week	Average English grade	N
Over 15 hours	10.00	1
10-14 hours		0
6-9 hours		0
3-5 hours	8.50	4
0-2 hours	8.52	25
All answerers	8.57	30

5 CONCLUSION

The present study aimed to look into the connection video game play has on Finnish secondary school students' English skills. It found a positive correlation between the English grade of students and the students' time spent on video games but the data did not reach statistical significance. On average, the higher the amount of hours spent on video games, the higher the grade in English was. This is an interesting finding which could be used in teaching English in Finnish schools. For example, English language games could be used alongside other forms of media as examples of authentic language. The actual reasons for video games' positive effect on people's English skills should be researched further in order to better incorporate those aspects into teaching itself. Still, video games do appear to be beneficial for a person's English competence, as video games provide a large amount of English language input to the player.

The study also aimed to compare different types of video games and how their players' foreign language skills differ from one another. It was found that massively multiplayer online games and role-playing games were the only two types or genres of video games to have a higher than average English grade. While the findings were not surprising, as arguably MMO and role-playing games emphasize language more than other kinds of video games, further research into specific video game genres and their benefits for foreign language learning should be conducted. It is possible that different kinds of video games could be used for learning and teaching specific areas of foreign language. As Gee (2007) argues, games feature motivating and enjoyable methods of learning. Well designed video games that emphasize the area of language that is to be taught could make language learning more enjoyable.

The relatively low number of participants is a drawback of the study. The data did not reach statistical significance, which made it difficult to make strong claims based on the results. The sample only consisted of 30 students, both from the eighth and ninth grade. Issues regarding the data show up especially when it comes to less common hobbies, such as arts, and reading and writing. A number of hobbies did not see all of their hours per week options picked. Arts was the most notable example of this. It only had one person choose the option for most hours per week, while the rest of the sample chose either the least or second to least amount of hours. However, the results were easy to explain and it is very possible that increase in video game play leads to an increase in English language competence for secondary school students.

Due to time constraints on both the students' and the researcher's end, the students' skill in English was evaluated based on their grade in English. A language test could have been used but instead the simpler option of grades comparison was chosen so as not to disturb regular school work too much. Using the students' grades as an indicator of their English skill has the drawback of making it impossible to analyse how video games improve a student's English skills. Based on the grade, only a positive or a negative correlation with a person's English skills can be seen, instead of being able to see which areas of language use video games may improve. Furthermore, there was not much variance in the students' grades. Even though Finnish secondary schools use a scale from four to ten, the students only had English grades ranging from seven to ten.

The grade may also not be regarded as a completely reliable indicator of real language competence. While the grade is based on a variety of language tests and is a relatively good indicator of a person's language skills, there are factors other than language skills that may have an effect on the grade. An example of this would be a student's behaviour in class or the teacher favouring of a certain student or a group of students.

Further research regarding video games and foreign language skills could also look into the effects of video games in languages other than English and their effect on a person's competence in the language in question. It is very possible that a video game can provide good language input in any language to its player, which would lead to improved foreign language competence for the player.

As the data by Entertainment Software Rating Board (2013) shows, video games are a very popular past-time activity and a hobby to many people of different ages. As with many other kinds of media, they can be used for much more than entertainment reasons. For example, they can be used to tackle difficult topics and issues of today's society, or to teach us about history. There is evidence that suggests they may be very beneficial for foreign language learning, such as the study by Uuskoski (2011). However, their effective usage and benefits for teaching, language teaching included, is not yet clear enough to make strong claims on how and when they should be used. Still, it is important that as their popularity increases, more in-depth research is conducted so that they can be used effectively as a tool for language teaching.

BIBLIOGRAPHY

- Bronkhorst, Q. (2012). Game vs. movie industry. MyGaming News and Reviews [online].
<http://mygaming.co.za/news/features/42864-game-vs-movie-industry.html>. (4 November, 2013).
- Crystal, D. (2001). *Language and the Internet*. Cambridge: Cambridge University Press.
- Dredge, S. (2013). PewDiePie unseats Miley Cyrus as world's most popular YouTube channel. The Guardian [online]. <http://www.theguardian.com/technology/2013/nov/08/pewdiepie-miley-cyrus-youtube-videos>. (12 December, 2013).
- How Much Do You Know About Video Games?* Entertainment Software Rating Board [online]
<http://www.esrb.org/about/video-game-industry-statistics.jsp>. (4 November, 2013).
- No. 29 Final Report*. Gamescom [online].
http://www.gamescom-cologne.com/en/gamescom/presse/presseinformationen/gc_pressinformationen.php?aktion=pfach&p1id=kmpresse_gamescom_e&format=html&base=&tp=k3content&search=&pmid=kmeigen.kmpresse_1377444223&start=0&anzahl=10&channel=kmeigen&language=e&arc_hiv=. (12 December, 2013).
- Gee, J. P. (2003). *What video games have to teach us about learning and literacy*. New York: Palgrave Macmillan.
- Gee, J. P. (2007). *Good video games + good learning*. New York: Peter Lang Publishing.
- Hauso, T. (2014). Brukar zombiar for å lære elevane etikk. NRK [online].
<http://www.nrk.no/hordaland/tar-zombiar-med-inn-i-klasserommet-1.11473634>. (23 March 2014).
- Kain, E. (2013). 'Grand Theft Auto V' Crosses \$1B In Sales, Biggest Entertainment Launch In History. Forbes [online]. <http://www.forbes.com/sites/erikkain/2013/09/20/grand-theft-auto-v-crosses-1b-in-sales-biggest-entertainment-launch-in-history/>. (4 November, 2013).
- Krashen, S.D. (1985). *The Input Hypothesis: Issues and Implications*. New York: Longman.
- Leppänen, S., Pitkänen-Huhta, A., Nikula, T., Kytölä, S., Törmäkangas, T., Nissinen, K., Kääntä,

- L., Räisänen, T., Laitinen, M., Pahta, P., Koskela H., Lähdesmäki, S. and Jousmäki, H. (2011). National survey on the English language in Finland: uses, meanings and attitudes. *Studies in Variation, Contacts and Change in English* 5 [online]. <http://www.helsinki.fi/varieng/journal/volumes/05/>. (13 December, 2013).
- Mitchell, A. and Savill-Smith, C. (2004). *The use of computer and video games for learning: A review of the literature* [online]. <http://dera.ioe.ac.uk/5270/1/041529.pdf>. (14 December, 2013).
- Global Games Market Report Infographics*. Newzoo [online]. <http://www.newzoo.com/infographics/global-games-market-report-infographics/>. (4 November 2013).
- O'Neill, P. H.: First 'StarCraft 2' player officially recognized as an athlete by U.S. government. *The Daily Dot* [online]. <http://www.dailydot.com/esports/kim-violet-dong-hwan-recognized-athlete-us-government/>. (12 December, 2013).
- Reinders, H. (Ed.) (2012). *Digital games in language learning and teaching*. Basingstoke: Palgrave Macmillan.
- Sundqvist, P. (2009). *Extramural English Matters: Out-of-school English and Its Impact on Swedish Ninth Graders' Oral Proficiency and Vocabulary*. Karlstad University Studies: Karlstad University.
- Uuskoski, O. (2011). *Playing video games: A waste of time... or not? Exploring the connection between playing video games and English grades*. Unpublished Pro Gradu thesis. University of Helsinki, Department of Modern Languages. <https://helda.helsinki.fi/bitstream/handle/10138/35037/playingv.pdf?sequence=1>. (13 December, 2013).

APPENDIX: THE QUESTIONNAIRE

Kuinka monta tuntia viikossa käytät videopelihin?

Xbox, PlayStation, Nintendo, PC, mobiili (puhelin, tablet, käsikonsoli jne.), Facebook, jne.

- 0-2 tuntia
- 3-5 tuntia
- 6-9 tuntia
- 10-14 tuntia
- Yli 15 tuntia

Kuinka monta tuntia viikossa käytät elokuvien/TV:n katseluun?

Myös Netflix yms. palvelut

- 0-2 tuntia
- 3-5 tuntia
- 6-9 tuntia
- 10-14 tuntia
- Yli 15 tuntia

Kuinka monta tuntia viikossa käytät liikuntaan?

Yksilö- ja joukkueurheilu yms. liikunnalliset harrastukset

- 0-2 tuntia
- 3-5 tuntia
- 6-9 tuntia
- 10-14 tuntia
- Yli 15 tuntia

Kuinka monta tuntia viikossa käytät musiikkiin?

Soittaminen ja kuuntelu

- 0-2 tuntia
- 3-5 tuntia
- 6-9 tuntia
- 10-14 tuntia
- Yli 15 tuntia

Kuinka monta tuntia viikossa käytät lukemiseen ja/tai kirjoittamiseen?

Kirjat, sarjakuvat, päiväkirja jne.

- 0-2 tuntia
- 3-5 tuntia
- 6-9 tuntia
- 10-14 tuntia
- Yli 15 tuntia

Kuinka monta tuntia viikossa käytät taiteeseen?

Maalaaminen, piirtäminen jne.

- 0-2 tuntia
- 3-5 tuntia
- 6-9 tuntia
- 10-14 tuntia
- Yli 15 tuntia

Harrastatko jotain muuta, mitä?

Jos vastasit kyllä, kuinka monta tuntia viikossa käytät sen harrastamiseen?

- 0-2 tuntia
- 3-5 tuntia
- 6-9 tuntia
- 10-14 tuntia
- Yli 15 tuntia

Jos pelaat videopelejä, minkälaisia pelejä pelaat eniten?

- Räiskintäpelit (Call of Duty,, Battlefield, Bioshock, Far Cry, jne.)
 - Toimintapelit (Batman Arkham, Assassin's Creed, Tomb Raider, jne.)
 - Roolipelit (Elder Scrolls, Final Fantasy, Mass Effect, jne.)
 - Tasohyppelypelit (Mario, Trine, jne.)
 - Massiivimoninpelit (World of Warcraft, Star Wars: The Old Republic, jne.)
 - Autopelit (Gran Turismo, Forza, Need for Speed, jne.)
 - Seikkailupelit (The Walking Dead, L.A. Noire, jne.)
 - Musiikkipelit (Rock Band, SingStar, tanssipelit, jne.)
 - Mobiilipelit (Angry Birds, Fruit Ninja, jne.)
 - Selainpelit (Facebook-pelit, muut pikkupelit Internetissä, jne.)
 - Joku muu, mikä? _____
-

Oletko asunut tai oleskellut jossain englanninkielisessä maassa?

- Kyllä
- En

Jos vastasit kyllä, kuinka kauan?

- Alle 1 kuukausi
- 1-4 kuukautta
- 4-12 kuukautta
- Yli 12 kuukautta

Jos vastasit kyllä, koska?

- Alle 2 vuotta sitten
- 3-5 vuotta sitten
- 5-7 vuotta sitten
- Yli 8 vuotta sitten

Oletko vapaa-ajallasi tekemisissä englannin kielen kanssa jonkin seuraavista kautta?

- Videopelit ja niitä ympäröivä kulttuuri
- Elokuvat/TV ja niitä ympäröivä kulttuuri
- Liikunta ja sitä ympäröivä kulttuuri
- Musiikki ja sitä ympäröivä kulttuuri
- Lukeminen/kirjoittaminen ja sitä ympäröivä kulttuuri
- Taide ja sitä ympäröivä kulttuuri
- Joku muu, mikä? _____

Mikä on viimeisimmän todistuksesi englannin kielen arvosana?
