



UNIVERSITETET I AGDER

Acquiring English Vocabulary Through Virtual Worlds

Exploring the connection between Norwegian EFL lower secondary pupils' gaming habits, essay grades and written lexical richness in light of their attitudes

JOVANA DAŠIĆ

SUPERVISOR

Ingrid Kristine Hasund

University of Agder, 2019

Faculty of Humanities and Education

Department of Teacher Education



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Abstract

The purpose of this study is to investigate the connection between Norwegian lower secondary pupils' gaming habits, their essay grades and their written lexical richness in English, as well as to offer gamers' attitudes towards gaming and language learning. A mixed method approach was applied in order to address three research questions focusing on the participants' lexical richness, their grades and their attitudes toward learning through gaming. Data were collected from 14 Norwegian lower secondary pupils, with a total of 20 (6 from year 8, 14 from year 9) essays. Six of the participants took part of the study both in year 8 and 9. Three methods were used to answer the research questions. First, all essays from year 9 were run through Cobb's (2019) Compleat VP tool to find measures of lexical diversity, lexical sophistication and lexical density, which, in this study, are defined as measures of lexical richness. Statistical tests were run in SPSS for Macintosh (v. 25; SPSS Inc, Chicago II, USA) to discover possible differences in lexical richness and grades in correlation to time spent gaming. Following, a qualitative corpus analysis of 12 texts was conducted to see what lies behind the quantitative numbers. Finally, six semi-open interviews were conducted with the aim to elicit the participants' attitudes towards gaming and learning with their longitudinal aspects in mind.

No results concerning the correlation between the amount of time the participants spent gaming and their written lexical richness were deemed statistically significant, arguably because of the lack of a larger dataset. However, both data from the quantitative and qualitative corpus analyses revealed that there is a statistically significant positive correlation between the amount of time the participants spent gaming and their English essay grades. The findings from the mixed methods also suggest that large amounts of time spent gaming are beneficial to other aspects of the student's English proficiency, such as greater self-confidence when speaking English and creativity when writing. In addition, findings concerning the motivation behind gaming suggest that teachers of English as a Foreign Language (EFL) in Norway should be aware of and implement activities either in the classroom or as homework in order to enhance some of the students' motivation for learning English as a second language. Furthermore, some of the informants in the interviews reported a desire for more gaming centered or open school writing tasks, as they believe it would give them a greater opportunity to show knowledge gained by gaming.

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1 Introduction

1.1 Background

Being a small nation with only 5.3 million inhabitants, Norway has always been a country where English has been prioritized and since 1969 it has been an obligatory subject for all children from the first year of school (Simensen, 2010). English, which is considered the world's lingua franca, can also be encountered in many people's lives outside the four walls of the Norwegian educational system. Although there is an agreement amongst the Second Language Acquisition (SLA) researches that extramural English activities can enhance language acquisition, little research is done on how playing digital games affect teenage learners' English acquisition in Norway. Because playing digital games is considered a social activity (Gee, 2000), the possible potential it has for benefiting the language learning process is of great interest. Reinhardt and Thorne (2016) point out "The language use in, around, and about games has increased in quantity, quality, and diversity, as game playing has become a truly global, interactive, multiplayer, and often multilingual practice" (p. 416). Considering the growing gaming culture and the importance gaming has in many young people's lives, surprisingly few studies are done on the relation between gaming and language learning. Language learning, however, is a complex term that cannot be measured by looking solely at one component. The Norwegian curriculum of English suggests four main areas that should be part of the English subject (Utdanningsdirektoratet, 2013, p. 2). Not surprisingly, as words are considered the main building blocks of a language (Read, 2000, p. 1), one component that can be found in all four areas is vocabulary. Therefore, the present study taps into the fields of gaming and vocabulary acquisition. Moreover, few studies have focused their attention on gaming and language learning research considering pedagogical implications. The purpose of this thesis is to contribute to filling that void.

1.2 The aims of the study

The aims of this study are to investigate the connection between Norwegian lower secondary pupils' gaming habits, their essay grades and their written lexical richness in English, as well as to offer the gamers' attitudes towards gaming and language learning. This thesis will employ the following research questions:

RQ1: Is there a connection between the amount of time Norwegian teenagers spend on gaming and their written lexical richness in English?

RQ2: Is there a correlation between the amount of time Norwegian teenagers spend on gaming and their English essay grades?

RQ3: What are the Norwegian gamers' attitudes towards gaming and language learning?

2 Theory

In the following chapter four sections will be presented. The first section (2.1) discusses the role of the English language in Norway both in and out of school. Section 2.2 deliberates aspects of video games in relation to language learning theories. Section 2.3 reviews previous research done on gaming and language acquisition, and the last section (2.4) focuses on the term *word*, as well as vocabulary knowledge, word frequency and measurements of lexical richness.

2.1 English in Norway

In recent years, the English language is viewed as a “universal language” (Utdanningsdirektoratet, 2013, p. 2), both because the exposure of English out of school has increased, but also because English language proficiency is improved (Rindal, 2013). Some even argue that English is no longer considered a foreign language in Norway, but has become a second language (Simensen, 2010, p. 475–476). Clearly, opportunities for language learning outside the four walls of formal education have increased due to the multimodality afforded by technology (Martinez and Schmitt, 2010). Norwegian teenagers are exposed to authentic English daily. The Norwegian MediaBarometer reported that in 2017, 62% of the population between the ages of 9–79 watched television for 1.6 hours a day on average. Although these numbers do not tell us how much of the input is English, we know that dubbing of movies and series in Norway is rare. We can then assume that Norwegians who watch television likely encounter some English daily. Another significant source is the Internet, where access to various English websites, as well as social media and video-sharing platforms is but a click away for most Norwegian teenagers. In fact, as much as 90% of the population between the ages 9 – 79 went online for 2.4 hours on a daily average in 2017. 90% of Norwegian teenagers from 9-15 years

spent 2.3 hours daily on the Internet on average in 2017. Compared to 2010, when only 72% of all teenagers spent an average of 66 minutes on the Internet daily, this is a significant factor. Norwegian teens also encounter authentic English through gaming. If we include smartphones and tablets, 84% of males between the ages 9–15 and 67% of females played digital games on a normal day in 2017. A total of 75% of men and women in the ages between 9-15 have played games daily between 2013-2017. During this period, the most popular were phone-games with 54%, followed by tablets and video games with, respectively, 28 and 19% of daily users. These mainstream video games are very rarely translated to Norwegian, but have language options such as English, German, French, Russian and Spanish (Nintendo Norge, 2017). We can thus assume that English would be the most natural choice for most Norwegian gamers, and alongside with Internet and television, video games are established as a source of authentic English in the life of many teenagers. Even though English is encountered in many out-of-school activities, the classroom is still an important arena for Norwegian teenagers to learn English. The curriculum LK06/13 states that in addition to learning the English language, pupils need to learn about the English-speaking world and its cultures. They go through 728 hours of mandatory English teaching, and those who want to can choose to expand these hours by electing additional English subjects (Utdanningsdirektoratet, 2013). LK06/13 also claims that learning English not only contributes to multilingualism, but also encourages personal development.

2.2 Digital games and second language learning theories

Interchangeably, two terms are often used in gaming research: video games and computer games (Gee, 2007; Begg, Dewhurst & Macleod, 2005). Because this thesis will not discriminate between these, a third term, digital games, will be applied. In the next chapter this term will be further explained, as digital games can refer to games played both online and offline, as well ranging from virtual simple houses to complex worlds. What follows is a deeper discussion of digital games in relation to central theories on language learning, with special attention to motivation.

2.2.1 Digital games and extramural activities

As mentioned above, the term digital games will in this thesis include both console games (such as PlayStation and Xbox) and computer games (both online and offline). Along with the growth of access to the Internet, the popularity of computer games has increased, and many players now meet online over massively multiplayer online games (MMOs). New online communities have come to life thanks to different MMOs, and World of WarCraft is an example of a worldwide social community with six million people interacting (Gee, 2007, p. 197). Other games, such as the Sims, do not allow for the same amount of communication and social interaction such as MMOs. In addition, the complexity of the text a player needs to read and understand to participate in MMOs is larger than in other single or multiplayer games (Gee, 2007). However, even single player games often allow for joint play and collaboration, as do multiplayer games (where small teams compete) (Gee, 2007). Although it is beyond the scope of this study to discriminate between these games and types of social enterprises due to lack of information, it is possible to assume that those who spend a great amount of time playing are engaging in some kind of communication. However, when reading the results of the present study, it is important to bear this in mind, as in the context of L2 acquisition MMOs may be exceptionally beneficial (Sundqvist, 2019). Reinhard (2017) points out that this is a weakness in player-learner oriented research, because determining which outcomes relate to which types of games can be hard. However, focusing on a player and all his experiences along with factors such as gender, age and L2 competence can provide authentic and ecologically valid results.

2.2.2 Central theories

Gee (2007) defines several learning principles encouraged by gaming, which he claims can be applied to language learning. Although he does not focus on L2 learning, his work can be transferred to second language acquisition and should not be left unmentioned. The Practice Principle, for example, is about the time learners spend on gaming, without the focus being merely on learning. He writes “learners get lots and lots of practice in a context where the practice is not boring” (Gee, 2007, p. 68). Another of his twenty-six principles is *The Principle of Competence*, suggesting that when gaming, learners can “operate within, but at the outer edge of, his or her resources, so that at those points things are felt as challenging but not ‘undoable’” (Gee, 2007, p. 68). We can then assume

that, while gaming, learners can practice and acquire language in a space that is challenging, but not overwhelming.

In his book, Gee talks about how words can have quite different meanings in different contexts. He distinguishes between utterance type meanings and what he calls “situated meanings”. Because language is always used with certain meaning expectations, it also has certain meaning potential. This potential is a range of meanings that the words uttered can take on in different situations or contexts. Gee uses the word “coffee” as an example. If you were to hear: “The coffee spilled, go get the mop” you would understand that the coffee was liquid. However, if the utterance changed to “The coffee spilled, go get a broom” you would interpret the coffee as grains. Gee further explains how all words can be understood either verbally or in a “situated fashion”. Students who read complex academic in their science books, can thus either understand it verbally, meaning that they can trade words for words, or in a situated fashion, meaning that they are able to understand how the language applies for the specific situation. For students to become problem solvers, only changing the word to their own definition is not enough. This may help them pass school tests, but when faced with actual problems they must be able to cash out words for experiences, actions and functions. The only way to acquire situated meanings, Gee argues, is when these words are heard and used in interactional dialogues with people at a higher level than the student. This explanation is similar to the SLA interaction hypothesis, which claims that comprehensible output is essential for language acquisition. The line can also be drawn to Krashen’s input hypothesis, as the effectiveness of the input is increased when during the interactions the student receives input above their current level. Such scenarios often lead the student to ask questions, request paraphrasing or use other strategies to overcome the difficulties and progress in communication. Additionally, Gee continues, students need to experience the actions to which the words apply. When this is done over time, the ability to build stimulations in the student’s mind of how the words are used in different contexts will improve. The ideal place to practice this understanding of situated meanings is in video games, as they are “action-and-goal-directed preparations for, and simulations of, embodied experience” (Gee, 2007, p. 205). Games are a good area for language to be situated, because they give the verbal information “just in time” (Gee, 2007, p. 206), that is, when the player is ready to use it through meaningful action.

Good learning requires the students to feel actively engaged in the process, rather than to be passive consumers. In video games, players are interactive, meaning that the player does something and the game does something in return. This encourages action and decision-making, giving the players the role as co-creators of the world they are engaging in. Furthermore, deep learning requires a prolonged commitment, one that can be acquired when people get heavily invested in a new identity (diSessa, 2000). Games often offer the possibility for the players to project their own fantasies and desires onto the character, giving them a new life in the game world. This commitment to a new identity is highly motivating, and motivation is an essential factor for language learning. More attention will be given to this in the following chapter.

2.2.3 Motivation

According to Ortega (2009) motivation may be the deciding factor when it comes to acquiring a second language. He defines motivation as “the desire to initiate L2 learning and the effort employed to sustain it” (p. 168). In his Affective filter hypothesis (1982, p. 29) Krashen explains how, if negative, emotional factors can hinder the acquisition of a second language. He further notes that the aspect of motivation is important, claiming that language teaching that fails to inspire motivation leads to boredom and affects the acquisition negatively. To understand motivation in video games, Przybylski, Rigby and Ryan created a model saying that the players meet several basic human needs through gaming (2010, p. 155). They further focus on three needs particularly found in video games: autonomy, competence and relatedness. Today’s games are designed to meet the players at their level of skill and challenge them as they go. In addition, players can play and chat with players at the same level and many games are rewarding trophies as the players advance. Their competence is continuously challenged and improved. Games are also designed to give room for players to solve problems and make their own important decisions. Minecraft, which has been a popular game among teenagers the past years, is an example of a game that allows for total autonomy. The only goal is to survive in an enormous world of monsters. If a player dies, he needs to start over collecting new resources and building shelters, but he is free to make his own choices (Duncan 2011, p. 7). According to the theory of Przybylski et al. (2010) this autonomy should be highly motivating. In the recent years, many single-player games have been released as multiplayer versions, suggesting that the developers of the games are aware of the

motivation brought by social interaction. Players do not only connect with people from around the world online, but some even form friendships in the real world. These social interactions play a vital role in the motivation behind gaming (Przybylski et al., 2010, p. 156).

2.3 Gaming and language learning research

2.3.1 International research

In 1991, Hubbard brought computer games and learning together by focusing on whether the linguistic quality of interaction through games is rich enough to provide learning or not. Subsequently, many studies have focused on incidental language learning, and Cheung and Harrison (1992) found that the participants acquired game specific words thanks to a great amount of time spent gaming. In later years, a much greater number of studies have been published on this topic. Amongst other, Thorne, Black and Sykes (2009) wrote a review of the existing research discussing learning not only in connection to gaming, but also to Internet communities. These communities are often referred to as virtual environments and are created by players who play multiplayer online games (MMOs) (p. 808). To progress in these types of games, players are often forced to communicate with other players. It is, however, unknown if the language of communication in virtual environments is transferable to other contexts (Thorne et al., 2009, p. 810–811). As Gee (2007) mentions in his book, incidental learning, for example through communicating, is what is encouraged through digital games. Such studies are relevant to the present paper, and several have been done in the past years. In 2011, Cobb and Horst (p. 25) instructed Francophone L2 English learners in Canada to play a mini game and found increased speed of lexical access and improved vocabulary. They concluded that the time spent gaming was vital and claimed that a 90-days long period of gaming was needed to provide progress. In another study in the US, English L3 university students played EverQuest 2, a multiplayer online game where students have their virtual identities. In this study, Rankin, Gold and Gooch (2006) found positive results regarding vocabulary acquisition, likely because of the interactions with non-playing characters in their virtual rooms. In Asia, Reinders and Wattana (2011) recorded Thai students while they were playing the MMO Ragnarok and looked for how much and how good the L2 interaction was, as well as the learners' eagerness to communicate.

Over the course of three sessions, they found positive effects, as the participants spoke more, as well as more comfortably. However, they did not see any significant improvement on the quality of the interactions (2011, p. 14–23).

2.3.2 Research in Scandinavia

A study done in Norway by Sletten, Strandbu and Gilje (2015) found a connection between students' grades in English and gaming. They did an analysis of a national survey with over 4000 students between the ages of 13-16 involved and found that although frequent gamers had lower scores in Norwegian and Math, they outperformed the non-gamers in English. In a similar study in Sweden, Sundqvist and Wikström (2015) also found a positive link between the amount of time spent on gaming and the students' English proficiency. With 80 students between the ages of 15-16 who did a national writing test, Sundqvist and Wikström found that students who reported to play games a minimum of five hours per week wrote more complex words than their peers who reported no time spent gaming. A more recent study done by Sundqvist (2019) found that teenagers who play computer games in their spare time receive a large English vocabulary and are especially good at difficult words compared to peers who do not play. In addition, Sundqvist (2019) found that the time young people spend playing proves to be of greater importance for the vocabulary than what kinds of computer games are being played. The study was carried out for three years and comprises 1,069 ninth grade students around Sweden. The pupils did two different word tests in English. In one, their productive word skills were tested, which meant that they were supposed to write the right words in English in a given sentence. In the second test, the students' receptive vocabulary was tested, and the task was to pair words in English with the correct explanation in English. The pupils also had to answer a survey about how they usually use English outside school hours, and habits around computer games were specifically addressed. The researcher studied the tests in detail and saw that the word knowledge extended beyond typical game terms and expressions, including words from different frequency levels (K2: wealth, lack; K3: acid, lawn; K5: oath, cavalry and academic: saturated) (Sundqvist, 2019, p. 99). The study also included a small qualitative study with 16 students. They answered the same questionnaire and were also interviewed about extramural English. They got questions about computer games and about how often and actively they take part in English activities via various media, for example through

movies and YouTube clips. Sundqvist (2019) also collected the students' essays from the national test in English to map the use of advanced and unusual words and expressions through frequency lists and the study of the papers confirmed the results of the larger selection. The participants who were used to playing games were good at using advanced words in writing. Some of the non-players were also very good, but only those who described themselves as big consumers of English in their spare time. Another study done in Norway by Brevik (2016) focused on a group of “gaming outliers” (Brevik, 2016, p. 40), because their reading skills were better in English than in Norwegian, their native language. Interestingly, these “outliers” were mostly boys attending vocational education programs. Brevik (2016) included five of these boys in a case study and found all five spent a great amount of time on gaming in English. The research done by Brevik, however, concentrated particularly on pupils’ comprehension skills. The focus of this study will be on their writing production.

2.4 Vocabulary knowledge in learner English

As mentioned above, Sundqvist and Wikström (2015) found more complex words were used by players than non-players in tests, claiming there is a positive link between English proficiency and gaming among Swedish teenagers. Sundqvist (2019) also found that both the time spent playing and types of games seemed to be linked with the acquisition of L2 vocabulary. There are, however, many ways to go about measuring English L2 proficiency. Vocabulary is only one aspect of language proficiency, but a vital one. As the unit that provides meaning to sentences, vocabulary is considered the most central part of any language (Read, 2000, p. 1). It is not possible to learn a new language without understanding the meaning of words. There are, however, several approaches to go about describing what should be known regarding a word to fully acquire it. All aspects of knowledge of and about words will in this study be referred to as *vocabulary knowledge*. The following chapters will go deeper into the meaning of a word as well as different approaches to measure vocabulary knowledge.

2.4.1 What is a word?

The term *word* is widely used both in our everyday life and in the research community. However, for language testing it is vital to be more precise about what it

means. In applied linguistics, several terms have been applied to differentiate between meanings of the term *word* (Read, 2000; Nation, 2001). The most specific term is *tokens*, meaning all words in a text. Tokens, sometimes referred to as “running words”, are particularly used to quantify the length of a text. In contrast to tokens, *types* are used to count all the unique words in a text, meaning that repeated word forms in a text are counted just once. A broader term, a *lemma*, represents a word with its inflections (e.g. talk, talks, talked, talking). Even broader than a lemma, is the concept of a *word family*, which includes regular derivatives in different parts of speech (e.g. govern, governable, ungovernable). Because findings from any study will be depended on how a word is defined, the importance of specifying the unit of measurement is vital. In this study words are defined as lemmas. The reason for this will be further discussed in chapter 3.

Table 1. “What is involved in knowing a word?” Nation (2001, p. 27).

Form	Spoken	R	What does the word sound like?
		P	How is the word pronounced?
	Written	R	What does the word look like?
		P	How is the word written and spelled?
	Word parts	R	What parts are recognizable in this word?
		P	What word parts are needed to express the meaning?
Meaning	Form and meaning	R	What meaning does this word form signal?
		P	What word form can be used to express this meaning?
	Concepts and referents	R	What is included in the concept?
		P	What items can the concept refer to?
	Associations	R	What other words does this make us think of?
		P	What other word could we use instead of this one?
Use	Grammatical functions	R	In what patterns does this word occur?
		P	In what patterns must we use this word?
	Collocations	R	What words or types of word occur with this one?
		P	What word or types of word must we use with this one?
	Constraints in use (register, frequency...)	R	Where, when, and how often would we expect to meet this word?
		P	Where, when and how often can we use this word?

Note: In column 3, R = receptive knowledge, P = productive knowledge
Nation (2001, p. 27)

2.4.2 Knowledge of a word

Although there are several components to knowing a word, researchers do not agree upon a universally accepted model of vocabulary knowledge. The issue of what is considered as knowledge of a word has been addressed by Nation (2001), who has developed a model that separates the knowledge of a word into three main areas: the form, the meaning and the use. These are further divided in three subareas each, as shown in table 1, followed by nine areas that can be known receptively or productively. This is the distinction between a learner's ability to recognize and understand a word when reading or hearing it, and a learner's ability to use the word independently. According to Nation, the latter requires a higher level of knowledge. He further states that knowing a word according to these idealized measurements applies only to a small proportion of total vocabulary, rather than being a realistic description. This was also noted by Meara (1996a, p. 46), who says "it might be possible in theory to construct measures of each of these types of knowledge of particular word; in practice, it would be very difficult to do this for more than a handful of items".

Other researchers describe vocabulary knowledge in three dimensions located in a "lexical space" (Daller, Milton & Treffers-Daller, 2007). The first dimension is referred to as lexical breadth or size, and represents the amount of words a learner knows, without considering how well these are known. This is the concern of the second dimension, called lexical depth. The third dimension considers how quickly a student can manage to use the form or meaning of a particular word from memory and is called lexical fluency. Palmberg (1987, as cited in Laufer, Elder, Hill & Congdon, 2004, p. 400) gives yet another explanation of what it means to have word knowledge. He states that there are progressive levels of lexical knowledge, starting with the learner only being familiar with the given word and ending with the learner being able to use the word in free production and correctly. This distinction between the receptive and productive vocabulary knowledge seems to be common in the discussion about what it means to know a word, although the understanding of these terms seems to vary. Receptive knowledge, sometimes referred to as passive knowledge, is in most cases interpreted as the learner being able to recall the meaning of a presented word form. Productive, or active, knowledge is usually interpreted as the capacity to use the right word to convey the desired meaning (Nation, 2001; Laufer et al., 2004). However, the productive knowledge can be interpreted in two different ways (Laufer, 1998). When a learner is using a word in

spoken or written language at free will, the productive knowledge is free. On the other side, if the learner is forced to produce the right words in for example a translation test, this is called controlled productive knowledge. Because the present study is dealing with free written production, the focus will be on the free productive vocabulary knowledge. The term *lexical richness* will be applied in connection to free written production and function as an umbrella term for more specific measurements. These will be further explained in chapter 2.4.4.

2.4.3 Word frequency

Researchers have been publishing reports of systematic attempts to measure vocabulary size for over 100 years (Schmitt and McCarty, 1997). Although their motivations are many, the assumption is that a large vocabulary reflects how much education or knowledge a learner has (Nation and Waring, 1997). When attempting to measure vocabulary size, they assume that students acquire the words used most frequently in the given language first and the less frequent words later in the process. Because of this, the tests are often centered on word list created using a corpus of written texts. Generally, this seems to be a valid measurement and research done so far has confirmed that word frequency is effective when evaluating English learners' vocabulary size (Daller et al., 2007). The General Service list with 200-word families has for a long time been considered as the most concise list and is widely used by researchers. However, word list based on the British National Corpus have in the later years also gained an important position in the field. It is expected that a native speaker has a foundation of 20.000 known word families of their language, and at the same time gains approximately 1.000 new per year (Nation, 2001, p. 9). For learners of a second language, however, it is considered appropriate to have a vocabulary consisting of the 2,000 most frequent words used in the given language to be able to read and understand (Thornbury, 2002, p. 21). According to Nation, these high-frequency words are mainly learned in the classroom (2005, p. 582). Other words that are typically acquired out of school are called mid and low frequency words (Nagy, Anderson, Pearson & Herman, 1987, p. 3).

2.4.4 Measuring lexical richness

Although within the research community, there is little agreement about which methods might be considered most suitable when measuring vocabulary knowledge (Milton, 2009, p. 125), we can generally say that the amount of distinctive words used is a measure of lexical richness. Simply counting the types in a text can provide us this information. However, because texts are of different lengths it would be difficult to compare this number. Another way of doing this is counting the different tokens for each type in a text, a well-known method called the type token ratio (TTR). The problem related to text length, however, remains the same. McCarthy (2005) provides two suggestions to solve this problem; either regulating the time of collection or the number of words in samples, or making the already collected texts equal by cutting the length. However, each of these suggestions can question the validity of our data collection. If we choose to interfere during the collection, this might have an impact on the data material we finally get. On the other hand, if we choose to cut the text to a given number of words, we might end up looking at one whole text and only parts of another (McCarthy, 2005). Researchers have tried to use various mathematical transformations and measurements of probabilistic models to solve the problem of various text lengths. These are beyond the scope of this study and will not be further discussed. Nevertheless, Tweedie and Baayen (1998, p. 323) claim that text length is crucial in all measures of written production. The decision concerning the TTR and text length flaws in this study will be discussed in chapter 3.

The measurements described above (TTR) do not take into account the word frequency but focus solely on counting types and tokens. This is called the *lexical diversity*, and some researchers believe that it is not a good indication of vocabulary knowledge (Laufer and Nation, 1995). Including word frequency and focusing mainly on low-frequency words would, according to Laufer and Nation, be a better indication. They hence developed measures of *lexical sophistication* and designed the Lexical Frequency Profile (LFP), a tool for testing learners' vocabulary. The aims and functions of this program will be explained in chapter 3. In addition to measuring lexical diversity and lexical sophistication, Daller et al. (2007) and Read (2000) point out additional aspects to the measurement of lexical richness. They mention lexical density, which is the proportion of all lexical words in the text, as another significant measurement. In addition, it is possible to measure lexical individuality (the amount of unique words

applied by one person compared to the group). There is, however, not one generally accepted definition of the term “lexical richness”, as the terms are used differently among researchers. McCarthy (2005), for example, considers lexical richness to be more specific, such as the description of lexical sophistication given above. In this paper lexical richness will be divided into three parts, measures of lexical diversity, lexical sophistication and lexical density.

3 Methodology

3.1 Choice of method

The goal of this thesis is to examine whether lower secondary pupils differ in grades and lexical richness in correlation to time spent gaming, and what attitudes they have towards gaming and learning. Considering these factors, it was decided that a mixed methods research (quantitative corpus analysis + qualitative corpus analysis) would determine the differences in lexical richness and grades and a semi-structured interview would be suitable for assessing the “students’ perspective” and get a deeper understanding of the data.

To achieve these goals, it is as established earlier, beneficial to consider “lexical richness” as an umbrella term for several measurements of vocabulary knowledge: lexical diversity, lexical sophistication and lexical density. Considering these factors, it was decided that a corpus analysis would be suitable for assessing the possible differences in vocabulary. The corpus consisted of 14 texts written by year 9 students at one lower secondary school in the county of Agder, as well as six texts from the same students by year 8. More information about the data and the participants will be given in chapter 3.2.1 and 3.2.2. The numbers quantified through the corpus examination of the year 9 students were statistically analyzed and compared. Additionally, 12 texts written by the same students in year 8 and 9 were each compared closely to provide a qualitative examination of the lexical richness as well as examining longitudinal variations. Lastly, in order to examine students’ attitudes towards gaming and language acquisition, interviews of the six students who were included in the quantitative analysis were conducted.

3.1.1 Mixed method research

Because this study includes both qualitative and quantitative research components, it is considered a mixed method research (Tashakkori and Teddlie, 2003, p. 11). According to Patton (2002), using mixed methods may provide breadth, depth, and numerical data that can give a more thorough idea of the phenomena under study (p. 234). The intent of using several methods is “to use multiple lenses simultaneously to achieve alternative perspectives that are not reduced to a single understanding” (Mertens, 2005, p. 292).

Creswell (2014) describes quantitative research as an investigation of a human or social problem through testing a theory composed of variables. To establish if the predictive theory holds true, the testing should be measured with numbers and analyzed statistically. On the other hand, qualitative research does not make regular use of statistical analyses and is “based on descriptive data” (Gass and Mackey, 2006, p. 162). Both approaches have a number of strengths, and although this study is primarily qualitative, quantitative elements are embedded. The quantitative method, the measuring of lexical richness through students’ texts, was initially chosen as a starting point to get a general idea of what differences might exist between Norwegian teenagers who spend different amounts of time on gaming and their lexical richness in English. The collection aimed to provide a set of numerical data setting the standard for the statistical analysis. Additionally, their essay grades were collected and compared to time spent gaming to see if there is a correlation. However, during the process it was discovered that the collected data was not sufficient in order to conduct meaningful statistical tests. Nevertheless, all data and statistics are kept, as both the data and the procedure were considered interesting for further studies. Subsequently, a qualitative corpus analysis of 12 texts was included to determine whether a change in the amount of time one participant spent gaming could affect the L2 writing production. In addition, a semi-structured interview was done with the same participants to provide a better understanding of the student’s attitudes and add depth to the data. Dörnyei (2007) points out that such approach that combines specific details from the qualitative data with numeric trends from the quantitative data might provide a better understanding of the results, as “words can add meaning to numbers, and numbers can be used to add precision to words” (p. 45).

3.2 The corpus analysis

Weisser (2016) defines a corpus as “a collection of spoken or written texts to be used for linguistic analysis and based on a specific set of design criteria influenced by its purpose and scope” (p. 23). The texts are part of larger corpus compiled by the research group ESIT (Elevspråk I Transitt/Pupils' Language in Transit), led by Ingrid Kristine Hasund at the Department of Foreign Languages and Translation at the University of Agder. The corpus consists of NSD approved collected students' texts in English, Spanish, German, French and Norwegian from year 8 in lower secondary schools to year 13 in upper secondary schools from all around Norway. This project aims to build a corpus that can be used by researchers to study questions related to, for example, L2 development and teacher feedback. In addition to including texts in different languages, the aim is also to incorporate different levels and genres. All the texts are written as part of the pupils' regular school work (tests, in-school writing, homework). Finally, the project aims to keep the same students for several years, making it possible for researchers to study longitudinal language development (Dirdal, Drange, Graedler, Guldal, Hasund, Nace & Rørvik, 2017). The corpus utilized in this thesis consists of 14 texts written by year 9 students and six texts written by the same students by year 8 at one lower secondary school in the county of Agder. Notably, the collected texts were both written in the second semester of the respective year.

In this thesis, the corpus analysis was implemented both in a quantitative and qualitative manner. In the quantitative analysis the focus was on numbers that could be significantly tested, validated and compared, whereas the qualitative analysis intended to find emergent patterns and common occurrences in the texts. Although numbers are not usually mixed with qualitative corpus analysis, there seems to be value in combining findings from the qualitative analysis with numerical frequencies. Therefore, the quantitative numbers will also be included in the qualitative corpus analysis. The data from the quantitative analysis is statistically presented and explained, whereas findings from the qualitative analysis are presented as excerpts from the students' texts. All data is presented in chapter four.

3.2.1 The participants

In total 14 students from one class participated in this study during year 8 (6 students, 5 male and 1 female) and year 9 (14 students, 6 male and 8 female). As part of the ESIT program, questionnaires were used to collect data about student's L2 habits and demographic information. Table 2 and 3 present their gender, English grade, L1, languages they comprehend in addition to L1, level of EE engagement (gaming excluded) and time spent on gaming. The level of EE engagement was established based on total self-reported data about how many hours weekly they; read English (Internet, books, Magazines etc.), write English (chatting, emails, texting etc.), talk English (in person, on Skype, on telephone etc.), watch (series, movies etc.) with English speech with and without Norwegian subtitle) and listen to English (audiobooks, radio programs, podcast etc.). Total hours were counted, and the division was made between low (below 5 hours), medium (between 5-10 hours) and high (over 10 hours) levels. In the quantitative corpus analysis, the students were grouped according to their gaming hours, starting from non-gamers (0-1 hours) and low frequent gamers (1-4 hour) to moderate gamers (5-10 hours) and high frequent gamers (10+ hours). Such divisions have earlier been done by Sundqvist and Wikström (2015).

Table 2. Information about the Y9 participants' background.

Pupil	Gender	Grade	L1	Languages in addition to L1	Level of EE engagement	Time spent on gameplay
P60200	F	4-	Norwegian	English, German	Medium	0
P60201	M	3+	Norwegian	English	Medium	1
P60202	F	4-	Norwegian	English	Medium	0
P60203	M	4	Norwegian	English	Medium	5-10
P60204	M	5	Norwegian	English	High	10+
P60205	F	4	Norwegian	English/German	High	0
P60206	M	4-	Norwegian	English	High	1
P60207	F	4	Norwegian	English/Icelandic	High	0
P60208	F	4	Norwegian	English	High	1-4
P60209	F	4	Norwegian	English/Mandarin	High	0
P60211	M	6/5	Norwegian	English	High	5-10
P60212	F	4	Norwegian	English/French	High	0
P60213	F	6	Norwegian	English/French	High	1-4
P60215	M	4/5	Kurdish	English/Norwegian	High	5-10

Table 3. Information about the Y8 participants' background.

Pupil	Gender	Grade	L1	Languages in addition to L1	Level of EE engagement	Time spent on gameplay
P60203	M	2/3	Norwegian	English	Low	1-4
P60204	M	5-	Norwegian	English	High	5-10
P60206	M	4	Norwegian	English	High	5-10
P60208	F	4	Norwegian	English	High	1
P60211	M	5-	Norwegian	English	High	5-10
P60215	M	4/3	Kurdish	English/Norwegian	High	1-4

3.2.2 The texts

The texts were written as part of the mandatory English mock exam in 2017 and 2018. All aids except the Internet and communication were allowed. This is considered a weakness because this thesis is focused on vocabulary knowledge, and the participants had the chance to use a dictionary during the data collection. However, because this is the norm for writing test in Norway, it is considered a strength that the testing situation was not artificial or felt unusual for the participants. In addition, the testing time was limited, and all factors were the same for all participants, making them comparable even though they had the possibility to make use of different aids. See Appendix 1 for the exact topic formulation and instructions. Not all texts are answers to the same questions, but throughout a reading-process, only texts of the same genre for each year were included in the study. To improve the validity of comparison, two of the 16 texts were removed from the data due to their distinction in genre and thus terminology. All texts were anonymous. All texts were cut to 300 words, and lemma was chosen as the definition of a word. As asserted, lemma is the base of a word and its inflections, and it was assumed to be closest to what the students know. Word family was considered but was deemed to give a faulty picture of the students' knowledge, because assuming knowledge of both the derived and inflected word form is considered too advanced. In addition, the version of VocabProfile (v.2, 2019) (Cobb, 2019) used in this study defines a word as a lemma.

The transcripts were put into Cobb's (2019) Compleat Web VP v.2 to generate counts of tokens and types. However, spelling errors, proper nouns and occasional Norwegian words were corrected or deleted, to assure that the counts only represent English words. This has previously been done by several researchers in the field of SLA (Laufer and Nation, 1995, p. 315; Horst and Collins, 2006; Helness, 2012, p. 149). See Appendix 2

for corrections. Because the decision of whether the participant misspelled or does not know the word was taken by my fellow student Marikken Auensen (2019) and me, this was a minor concern regarding validity. Her thesis is based on partly the same data but looks at the connection between lexical richness and teachers' holistic assessment. However, from the context it was mainly clear whether the word was used right and misspelled, or if the participant clearly did not understand the word. In times where this was unclear, it was considered a strength discussing the cases together. In addition, students' use of advanced or infrequent vocabulary was assessed with the help of frequency lists. For each text, the lemmas were counted, and the lexical density was measured in the Compleat Lexical Tutor tool. This tool creates a lexical frequency profile for each text, sorting the lemmas into frequency list and calculating TTR and lexical density. Although the program offers several different word lists, the *New General Service List* (NGSL) is intended for second language learners of English (Browne, 2014, p. 1). Therefore, the NGSL was considered to be most suitable for the present study. Furthermore, the program operates with four-word lists: K1 (1-1000 most frequent words), K2 (1001-2000), K3 (2001-2802) and NAWL (963 lemmas). Additionally, words can be marked as off-list if they are not found in any of the lists mentioned above.

3.2.3 The analytical procedure

To answer the first two questions, the data from the quantitative and qualitative corpus analysis was used. The numbers from the quantitative data were analyzed using inferential statistics, whereas the qualitative corpus analysis is presented with chosen parts of the student's texts. The third research question was based on interviews and analyzed in an inductive manner. All statistics tests were conducted in SPSS for Macintosh (v. 25; SPSS Inc, Chicago IL, USA). Independent Kruskal-Wallis tests were used to calculate significance and effect size for tests with numeric variables because there were more than two gaming groups involved (Robson, 2002, p. 443). The correlation of Spearman's rank order was used in the analysis of correlations involving ordinal data.

3.3 The interviews

The intention with interviews is to collect views and opinions by asking questions (Benati, 2015, p. 25). What type of interview the researcher wants to develop depends on the level of control that is desired. If the purpose of the research project is to collect specific information, a highly structured or closed interview is normally applied. In such interviews there is little flexibility, because the same questions are often posed in a predetermined order and with the same words. An open interview, however, aims to explore more generally. Although the interview is prepared beforehand, and the interviewer uses guiding questions, there is room to elaborate on certain issues that may occur during the conversations (Dörnyei, 2007, p. 136). For this research, an open or semi-structured interview was considered most suitable. According to Dörnyei (2007) this is a good choice when the researcher is familiar with the “domain in question” (p. 136). The information about the students and their profiles conducted beforehand provided insight to the informants gaming routines, and background questions such as gender and age were not necessary. An open-ended interview guide was constructed with the aim to elicit the students’ thoughts and attitudes towards the use of digital gaming in connection to language learning. It consisted of five questions with bullet points containing keywords or sub questions attached to each question. Depending on how the interviews developed, the bullet points were assumed to function as cues or follow-up questions.

Although they are now in year 10, the same six students who took part of the corpus analysis by year 8 and 9 agreed to participate in the interviews. Because they already had agreed and signed consents to participate in ESIT, only an oral confirmation from both their teacher and all participants was required. However, they were all informed about the topic of the conversations and assured total anonymity prior to the interviews. Because it was assumed the informants would feel most comfortable expressing their opinions in their first language, all interviews were conducted in Norwegian. The interviews were 15-20 minutes long and completed in March 2019 at a lower secondary school in the county of Agder. During the interview the researcher took notes and although not used consecutively, the interview guide was brought and functioned as a guide. See Appendix 3 for the interview guide.

3.3.1 The informants

All informants were from the same class and the interviews were conducted while they were students at year 10. In total, six students were informants, and they are all given anonymous names in this thesis. All informants were similar in age and had similar language backgrounds. Except Martin, all informants were all categorized as “high” on the level of EE engagement scale both in year 8 and 9. Martin went from low in year 8 to medium by year 9. Their time gaming ranged from 1 to 10+ hours and varied from year 8 to 9. In total, the informants consisted of five male and one female student. Table 2 gives an overview of information about the informants employed in the interviews.

Table 4. Information about the interview informants.

Informant	Gender	Time spent gaming Y8	Time spent gaming Y9
Martin	Male	1-4	5-10
Frank	Male	5-10	10+
Casper	Male	5-10	1
Andrea	Female	1	1-4
Jens	Male	5-10	5-10
Simon	Male	1-4	5-10

3.4 Ethical considerations

The Corpus utilized in this study adhered to the ethical guidelines used by the Norwegian Research Council. All participants were informed their rights to withdraw at any time. Written consents were collected from all pupils and numbers or anonymous names are used to ensure total anonymity. The interviewers were assured total anonymity and confidentiality, and no names were written to ensure that nothing could be traced back to the informants.

3.5 Reliability and validity

In order to gather background information, questionnaires were used in this study. In such information gathering surveys, there is a chance that respondents give responses that are safe, and not necessarily true (Ary, Sorensen & Walker, 2014). This might happen if the respondents are afraid that their answers will not be anonymous, or if they give responses they think the researcher wants to obtain (p. 436). Although it is difficult to know if all

answers were given truthfully and this could be a potential invalidity, all informants were assured total anonymity. In addition, the interviews conducted aimed to strengthen this validity.

Because a mixed method was conducted, the aim was to report the statistical results and discuss the qualitative findings that either confirm or disconfirm the numbers. This is called a side-by-side approach, because the researcher first presents one set of finding and then the other, before the findings are compared and discussed (Creswell, 2014, p. 215-223). However, this comparison does not always yield a clean convergent situation. In this study, the constructs of the quantitative corpus analysis are possibly limited, because a larger collection of data is needed in order to conduct meaningful statistical tests. However, this limitation will be followed up and the possible limited dataset will be included in the discussion.

Both a qualitative corpus analysis and interviews were utilized in this research. In qualitative research, research bias is a potential invalidity (Ary et al., 2013). Because personal attitudes or feelings can affect how the data is interpreted (Ary et al., 2013). Therefore, self-reflection was applied throughout the process to eliminate possible research bias. As reflected in the findings of this study, many of the same results reoccurred in both the qualitative corpus analysis and interviews, arguably improving the research's validity and reliability.

Validity and transferability in mixed-method research refer to how generalizable the findings are to other contexts or larger groups (Dörnyei, 2007, p. 52). Although the goal of qualitative research is not to generalize, Ary et al. (2013), it can be argued that the transferability is strengthened because many of the findings from the interviews corresponded with the corpus data. However, as the study only included 20 essays in total, it is difficult to say if the results are generalizable. Nevertheless, the study's generalizability is questionably strengthened because most of the findings from the qualitative corpus analysis and the interviews are consistent with previous research.

4 Results and analysis

In this section an analysis of the results provided from the quantitative corpus study, qualitative corpus study and the semi-interviews will be presented. The presentation of the results is organized method-wise, and findings that are not relevant are excluded from the study. In addition, to make the presented findings easy to follow, the research questions each method aimed to answer are included.

4.1 The quantitative corpus analysis

RQ1: Is there a connection between the amount of time Norwegian teenagers spend on gaming and their lexical richness in English?

Because the data sample was small and not deemed normally distributed, a Kruskal-Wallis H test was applied to examine whether the difference in lexical richness was significant. As mentioned earlier, the lexical richness is defined by three separate measurements: lexical diversity (TTR), lexical density (LD) and lexical sophistication (LFP). The results with descriptive data are presented in the tables below.

Table 5. Kruskal Wallis test of differences in lexical richness.

	TTR	LD	LFP
Kruskal-Wallis H	1,719	2,232	0,727
df	3	3	3
Asymp. Sig.	0,633	0,526	0,867

The mean TTR is higher for the low frequent and moderate gamers groups by respectively 0.05 and 0.01 than the non-and high frequent gamers. However, the range for the non-gamer group is large, suggesting that the group might have outliers affecting the mean. A relatively high standard derivation of 0.054 and a difference in mean and median underlines this issue. Not surprisingly, due to the small samples, no significant differences were found regarding the TTR. The Kruskal Wallis Test showed no significant difference between the four groups and as the p-value was $p = 0.633$.

Table 6. TTR data.

TTR	Mean	Median	Std. Dev	Min	Max	Range
Non	0.48	0.5	0.054	0.41	0.56	0.15
Low frequent	0.53	0.53	0.042	0.50	0.56	0.06
Moderate	0.49	0.47	0.037	0.46	0.53	0.07
High frequent	0.48	0.48	0.000	0.48	0.48	0

The measures of lexical density show that, apart from the high frequent gamers scoring 0.04 points lower, the groups have the same mean scores. The descriptive data shows that the mean is reliable as a summary, as it is nearly equal to the median. The standard deviation is also small, and the range between the highest and lowest scorer in each group is low. However, the descriptive statistics of the non-gamer group reveal that the data are scattered and not centered around the mean, as the range and standard deviation are high. In addition, this means that the data may not be normally distributed. Nevertheless, there does not seem to be any difference in lexical density between the groups, as can be seen in table above. The statistical analyses confirm this, as the Kruskal-Wallis H reveals a p-value of 0.526, which is above the confidence level of $p = 0.05$.

Table 7. LD data.

LD	Mean	Median	Std. Dev	Min	Max	Range
Non	0.45	0.47	0.031	0.40	0.48	0.08
Low frequent	0.45	0.45	0.007	0.45	0.46	0.01
Moderate	0.45	0.45	0.001	0.44	0.46	0.02
High frequent	0.41	0.41	0	0.41	0.41	0

The analysis of the student texts shows that there is no difference between the low frequent and high frequent gamers when it comes to the number of advanced words they use in their texts. The measurement of advanced words is in this thesis called LFP (lexical frequency profile), and includes words found in the NGSL3, NAWL or Off-list frequency lists. The NGSL is an updated version of the GSL, and uses lemma instead of word families. These numbers were not measured by percentage but rather accurately, because the percentage number would include several counts of the same words, showing

a misleading picture of the use of advanced words. The histogram was not bell-curved indicating that the data is not normally distributed, also suggested by the difference between the mean and median in the Moderate group (Rasinger, 2013, p. 124-127). Again, any outliers might have impacted this score. The range seems to lower with the higher amount of gaming time, but this could also be due to different group sizes. The statistical analyses show that there is no statistically significant difference between the four groups' usage of advanced words, as the Kruskal-Wallis H reveals a p-value of 0.867, which is above the confidence level of $p = 0.05$.

Table 8. LFP data.

LFP	Mean	Median	Std. Dev	Min	Max	Range
Non	14.12	14.50	7.039	4	22	18
Low frequent	19.50	19.50	10.607	12	27	15
Moderate	16.33	18.00	3.786	12	19	7
High frequent	17.00	17.00	0	17	17	0

RQ3: Is there a correlation between the amount of time Norwegian teenagers spend on gaming and their English grades?

To calculate the correlation between the amounts of time Norwegian teenagers spend on gaming and their English grade, and because the data was not normally distributed, a Spearman's correlation test was performed. The relationship between grades and gaming is showed in this scatterplot. Generally, there is a moderate positive relationship, as grades go up as the amount of time spent on gaming goes up, which is approximately linear. There are two outliers, but they were in this case not considered extreme enough to be a data entry error. Additionally, the monotonic relationship was deemed valid because Spearman's correlation is not very sensitive to outliers (Robson, 2002, p. 423)

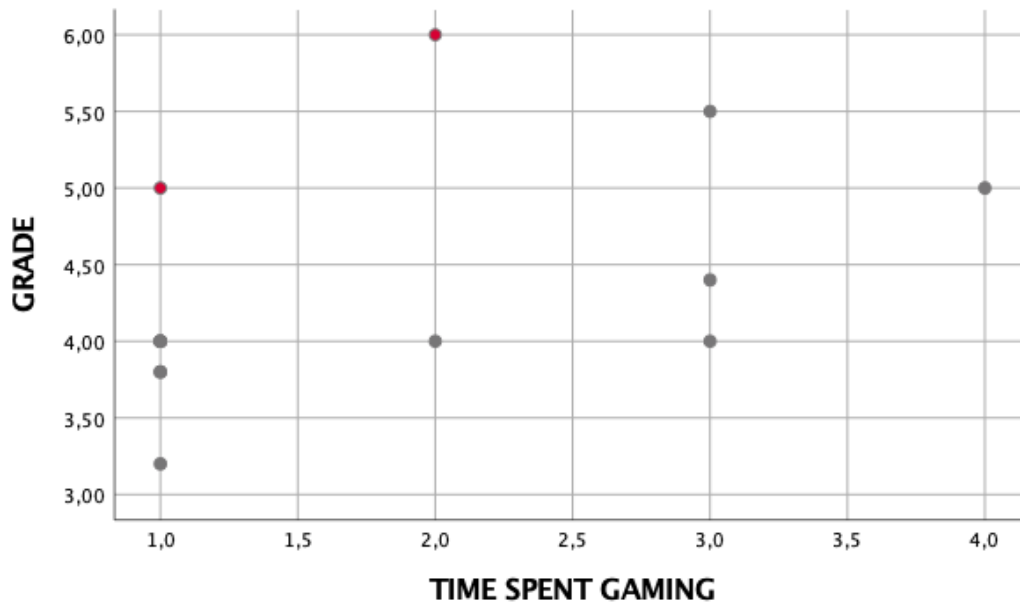


Figure 1. The relationship between grades and gaming.

Spearman's rank-order correlation was run to determine the relationship between the 14 students' English grades and the time they spend gaming. There was a strong, positive correlation between gaming time and English grades, which was statistically significant ($r_s(8) = 0.715, p = 0.004$).

Table 9. Spearman's rank-order correlation between gaming time and English grades.

			Grade	Gaming Time
Spearman's rho	Grade	Correlation Coefficient	1,000	0,715**
		Sig. (2-tailed)	.	0,004
		N	14	14
	Gaming Time	Correlation Coefficient	0,715**	1,000
		Sig. (2-tailed)	0,004	.
		N	14	14

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

4.2 The qualitative corpus analysis

RQ1: Is there a connection between the amount of time Norwegian teenagers spend on gaming and their lexical richness in English?

RQ2: Is there a correlation between the amount of time Norwegian teenagers spend on gaming and their English essay grades?

Presented in table 11 is information about the students along with their English habits, grades and TTR, LD and LFP scores for each text. What follows is a short analysis and comparison of a part of the students' essays (300 words) from year 8 and 9, linked to information from table. Two illustrations are included in what follows, but all texts can be found in the Appendix (4). All NGSL_3, NAWL and Off-List are marked yellow in the texts.

Table 10. Information about the participants' English habits, grades and TTR, LD and LFP scores for each text.

Pupil	Martin	Frank	Casper	Andrea	Jens	Simon
Gender	M	M	M	F	M	M
Time spent on gameplay Y8	1-4	5-10	5-10	1	5-10	1-4
Time spent on gameplay Y9	5-10	10+	1	1-4	5-10	5-10
Grade Y8	2/3	5-	4	4	5-	4/3
Grade Y9	4	5	4-	4	6/5	4/5
Level of EE engagement Y8	Low	High	High	High	High	High
Level of EE engagement Y9	Medium	High	High	High	High	High
TTR Y8	0.46	0.43	0.43	0.55	0.58	0.46
TTR Y9	0.46	0.48	0.42	0.50	0.53	0.47
LD Y8	0.44	0.40	0.38	0.45	0.48	0.40
LD Y9	0.44	0.41	0.47	0.45	0.46	0.45
LFP Y8	7	11	11	16	28	10
LFP Y9	12	17	21	12	19	18

In year 8, Martin reported to spend 1-4 hours on gaming every week and his final essay was graded 2/3. However, in year 9, he reported 5-10 hours gaming per week and his essay received a grade of 4. No difference appeared in the two texts' type-token ratio or lexical density. However, in year 9, Martin used a higher amount of advanced word in his text compared to year 8. In addition, his level of EE engagement went from low to medium, meaning that he got more English input during year 9 compared to year 8. Interestingly, his essay from year 8 is a story about gaming and how the main character meets up with a friend he met through the game and with whom he has been playing for years. Additionally, in his year 9 essay Martin has several words marked yellow which are particularly interesting in terms of gaming, such as: scouts, tribe, gunshots, screaming and ridge. Although it is beyond the scope of this study to draw connections between words used in the students' texts and the games they have engaged in, some findings from the texts will be discussed in relation to the interviews.

Hi my name is i am years Old. I live With my dad, **mom** and Brother. I play on my pc. One day i played a Player did come over to Me and Said hi. I said hi back, we played together for years and now he wants me to meet him. He asked if I wanted to join him on the Holiday. week after, they were right out side the house. I said **bye** to my mom and dad, my brother were on his room. after a hour we stopped, I saw a nice **cabin**. said there are we gone live. Yes i said. We ran out of the car and stopped at the cabin. I saw his parents walking another way. I asked were they are going. He said they have their own cabin, This is mine. I have **two** computers, we can play or. But I do not have. No problem I have. We walked is side and it was big. We began to play, we played the whole night. After that we heard a strange noise. It was like someone was **scratching** on the door. Then the light went dark and we heard the door opened. I said Where are you, I said it very low. He said right over here. I slowly began to walk over. Than I saw a **creature** that I have never seen. It had long big eyes and a long body. I was on the floor. The thing saw me and made a big noise. It **punched** me and everything went black. I woke up in my bed. It was a dream. But then I saw the door was open and was on the floor. I saw that half of my body was gone. And after that creatures came in and

it was early in the morning and I woke up by someone saying you need to wake up. it was my little sister that woke me up. I saw out the opening of the tent and that people were already awake and began making the breakfast. here in our tribe we have breakfast together. I got my clothes on and walked out. when I walked out I saw my father with the fire making corn with bread. I walked over and met him with a smile. But he did not smile back. I asked what is wrong. He answered the other tribe hours away has been attacked. by who He answered I do not know with a sad face. I walked away and was on my way to my tent again. but I did not come that far before one of the scouts that was on the north ridge came down screaming they are coming! the people in our tribe started panicking. But my father got everyone to calm down. He said we do not know if they know we are here, maybe they just walk past our camp. Nevertheless he was wrong. Suddenly I heard gunshots and people screaming. I grabbed my sister and ran. My friend that ran beside me got shot in the head and fell right in the ground. I turned around and saw the camp on fire. I saw how the white men cut of the hair to the women and shot people. But then I got a gun stuck in the face and passed out. I woke up and saw around me. I saw the camp, or what was left of it. almost everything was burned down and there were dead people lying on the ground everywhere. I stood up and then I realised

During year 8, Frank reported 8-10 gaming hours per week and his essay was graded a 5-. However, he increased his gaming to 10+ hours a week the next year and received a 5 on his final essay. He did not report any other changes in his EE activity, and the level was deemed to be high both years. Remarkably, Frank improved his type-token ratio from 0.43 to 0.48 from year 8 to 9. His lexical density also increased and his essay in year 9 consisted of more advanced words compared to year 8.

As reported by Casper, his gaming time went from 5-10 hours a week during year 8 to only one hour a week during year 9. His overall EE activity otherwise remained high during both years. His essay score by the end of year 9 year was slightly lower compared to year 8, as he went from 4 to 4-. The type-token ratio score decreased from year 8 to 9, notably the score was 0.42, which is the lowest score among his peers. However, Casper increased his lexical density and scored higher at lexical proficiency using more advanced words by year 9. Nevertheless, when analyzing Casper's essay from year 9, it was found that many simple verbs were repeated throughout the text. This might be the reason for his low TTR score, and at the same time, the increased LD score. Because

lexical density only measures lexical words divided by the total number of words, the issue of repetitive word use is not considered.

Andrea was considered a non-gamer during year 9, but as she increased her gaming from one hour to 1-4 hours she joined the low frequent group of gamers. Her overall EE activity level was reported as high during both years. Her essay grade scores were equal, and her lexical density did not change. However, her high TTR of 0.55 decreased to 0.50 by year 9. In her essay written in 8th grade, 16 advanced words were found, whereas 12 were found in 9th grade. Arguably, in both her essays, numbers (two, five, seven, six, two, three) are counted as advanced words according to Cobb's (2019) Compleat Lexical Tutor tool.

During both 8th and 9th grade, Jens reported to spend 5-10 hours gaming each week. In addition, he was highly active in other EE activities. His essay received a score of 5- in year 8, and by year 9 his essay grade went up to 6/5. Remarkably, his TTR, LD and LS scores decreased from year 8 to 9. When reading the texts, it was noticed that many of the sentences Jens wrote in his 8th grade essay repetitively started with the word "The" and "I". By year nine, Jens showed a greater variety in his sentence structure, including linking words such as suddenly, however, during and while. This provides both better structure and flow to the text, which is interesting in terms of how Jens describes his own EFL writing practice through the interviews. This will be further discussed in the next chapter.

Simon reported an increase in gaming time from 1-3 hours a week in 8th grade, to 5-10 weekly hours during year 9. Following the increase in gaming time, his TTR, LD and LS score all improved from year 8 to year 9. His overall EE activity remained high during both years, and his essay grade went from 3/4 to 4/5.

4.3 The interviews

RQ3: What are the Norwegian pupils' attitudes towards gaming and English proficiency?

All data until now has been based on students' texts. However, a very interesting part of the gaming and learning aspect is the students' attitudes along with the longitudinal effect. Therefore, in order to answer the third research question, the same students that were included in the qualitative corpus analysis also took part in semi-structured interviews. To investigate their attitudes about gaming habits and how these have affected them over time, they were posed open questions with their gaming profiles and grades in mind. It is important to note that the informants knew that the focus of the interviews was on gaming, and that they were chosen because they had reported a change in their gaming time from year 8 to 9. In the following chapter the main findings will be presented. Because the interviews were conducted in Norwegian, all utterances presented are translated to English. The results will be presented question-wise as projected in the interview guide (Appendix 3), although due to a semi-structured interview approach, additional information may emerge. In addition, connections will be drawn to the qualitative corpus analysis results presented above.

When asked where they believe to acquire most English, there was an overall agreement among the informants. They all answered that most of the learning happened in their spare time at home, but they varied somewhat as to which activities they assumed to be most beneficial to English language acquisition. Martin was convinced that most of his English competence was gained through gaming. He said, *"I play SCGO, usually two-three hours a day. In 8th grade I didn't have a gaming PC, and therefore I couldn't game as much as I wanted to. After my confirmation I spent all my money to buy one (computer), and then I started gaming a lot. I subsequently bought a professional headset, because it is all about communication"*. The lack of a PC and headset explain the findings from the qualitative corpus analysis where it was found that Martin increased his game time notably from year 8 to year 9. Martin further explained that he usually spends two-three hours gaming a day with his team where many of the players are from the US.

Both Frank and Casper also thanked their gaming effort for their English skills but focused their attention on a communication platform called "Discord". Frank said, *"I usually join different chat rooms, depending on what game I decide to play. Before we used to chat, but now, as the communication needs to be immediate for us to win, we*

usually only talk". Casper added that it was easy to pick up words and phrases, especially from his friends from the US. He said, *"You kind of adapt your language to theirs. The pronunciation as well. I usually play PUBG, it is the best game"*.

Andrea, who is not as big of a gamer as the other informants, reported to learn as much through gaming as through watching Netflix and movies with English subtitles. Additionally, she enjoyed watching her brother play; meanwhile she felt that her language abilities in English improved. She added, *"At school I feel like I'm learning a nice English language, I mean, like, proper language. But through gaming you learn to talk like the natives. Like, phrases that you can use in everyday talk. I've learned a lot of, kind of cool expressions through Minecraft, and a lot through Netflix"*.

Jens also agreed with his peers about where he thinks he acquires most English. Like Frank, he also spent a lot of time on the communication platform Discord. *"It's kind of like Skype, but you can choose different rooms to join. The servers are divided into themes and different games"*. Additionally, he explained how he does a lot of gaming research on YouTube, claiming that it is necessary to learn from others in order to be at a high level. To that, he added *"I've noticed that my self-confidence when talking English has improved a lot, because I've been forced to both listen and talk in order to be really good (in games)"*.

Simon stated that he thought he learned the most from YouTube, but a lot from Netflix and gaming as well. *"Before, I used to chat a lot when gaming, so I learned to write English really fast. It has helped me during the tests (at school). I always finish fast. Now I mostly talk so I don't learn as much writing, but my talking, or what is it called, pronunciation? It is much better"*.

When asked what they think about gaming and leaning in general, and what they think they have gained through playing, several different theories emerged. Martin emphasized the fact that playing games is, above all, very motivating. *"I usually can't wait to play. So, it's not like I put it off like I do with my homework sometimes. I count hours until I can play again. I guess because I do it a lot, like the frequent repetition, made me safer in talking English. Also, my responsiveness, I think it is much faster now than when I started playing"*. He further explained how good cooperation is essential if you wish to succeed in a game, saying it took him some time to learn because he is a bit shy. However, when he got to know his teammates, he found it much easier to cooperate with them.

After giving his answer some thought, Casper answered that he believed he is much more creative. *“Often, I write about some gaming experience in my school texts, or something I wish would happen in a game. It’s a world beyond the boring everyday life, and I think it has given me some new perspectives”*. He added that he believes he is much faster thanks to the frequent gaming, both in his reactions in general but also when he writes on his computer. His wish is for the schools to implement a subject where the pupils can learn to write on the computer, saying *“I feel bad for those who still write with only the pointing finger”*. Andrea once again mentioned her brother. *“I think he has developed his brain because of all the gaming. Like (laughing), he is much smarter now. I mean, it makes sense, you have to think a lot and very fast”*.

Jens believes that there is a subconscious motivation that he finds important. *“I play a game that requires you to be very strategic, and you need to be into politics. It’s called Artilla Total War”*. He explained how the game is about war and politics, and that he has done a lot of historical research. He continued, *“And I don’t look at it as learning if it is to advance in the game. Then, it is kind of part of the game, even though I probably learn a lot”*. Simon emphasized the communication that he believes is essential to both gaming and language learning. *“You don’t really have a choice but to communicate in English. And yes, of course you learn a lot by doing that several hours each day. You can see what they (the other players) write and respond, or nowadays, we mostly talk. Isn’t it obvious (that language learning is happening)?”*

As a follow up question to the communication part, all informants were asked what kind of strategies they have for the communication to flow. The question was further explained and formulated in this manner; do you ever find yourself not understanding parts of the communication and if so, what do you do? Although some answered that it was rarely a problem because the English they use is considered as simple, interesting tactics to ensure there is flow in the communication emerged. One strategy they use is to assume the meaning of the given words out from the context. One of the reasons for this tactic seems to be the lack of time, as Casper noted *“... I sometimes do a search on Google translate, but often there is no time. We must play fast and so I just assume what they mean out of the contexts”*. However, both Frank and Simon reported to use some of the strategies recognized by Gee. Frank said, *“... Oh, yes, it’s not a big deal. I just ask, like, what do you mean, or can you reword that, and then they quickly do”*. Similarly, Simon reported *“... If some of my mates say words that I don’t understand, I just ask them*

what that means. They always explain or find another way to say it, so that it makes sense to me". In addition, Google was mentioned by several of the informants, but rather as a tool to be used before the game starts. In order to know exactly what to do, Google was also the go to tool for Andrea "... *When I used to play Minecraft I had to Google some words, either before or during the game. But not too many, just some that would tell me exactly what to do*".

When asked if the participants believed that their gaming-habits attributed specific to their English language knowledge, they all firmly agreed that they did. Interestingly, all informants revealed that they had more self-confidence and felt safer talking English in the classroom thanks to their gaming experience. Martin said that he felt like his overall English knowledge had improved thanks to gaming, but especially his ability to express himself orally. "*I'm sure, because of the servers where we talk to other players, that my speaking skill have improved a lot*". Frank also expressed that the most noticeable improvement was the oral part. "*Although I feel like my vocabulary is bigger, I don't notice it as much when I am writing, but when I speak I feel more confident. I feel safe because that is what I do every day, I guess*". Andrea stressed that the repetition, both when gaming and watching Netflix, made her remember new words and expressions. "*Yes, I've picked up words both from Minecraft and shows that I watch frequently. The words and phrases that I encounter over and over again are easy to remember*". Jens noticed that his ability to build sentences had improved during his gaming time. "*It has helped me a lot to listen to people that have English as their mother tongue. I've learned to structure my words and my sentences have improved both when I write and talk. When I write I usually have to say the sentences in my mind to hear if they are correct, though*".

Interestingly, when reading Jens' two texts, it was noticed that he had a better structure and flow in year 9, avoiding repetitive words such as *I* and *The* and including several linking words. Simon did not notice any improvement in his written proficiency, but he feels much safer talking English in class. "*I used to be afraid to say something in English class, and my teacher said that I had to be more active. I hated it before. Now it's a piece of cake. I know how to answer questions and I don't need to prepare*". He pointed out the improvement has been clear to him during the last year, also shown by the qualitative corpus analysis where he reported to have increased his gaming from 1-3 hours a week in 8th grade, to 5-10 weekly hours during year 9. However, even though he said that he

could not notice any improvement in his written proficiency, his essay grades went from 3/4 in year 8 to 4/5 by year 9.

The informants were asked if they felt like they could use what they learned from gaming in their writing tasks and if they were interested in learning English to succeed or advance in gaming. When asked for an example of words that he gained from gaming, Martin said that he used the term “GG” (good game) a lot when gaming, but it has now transferred to for example the soccer court or to the classroom: *“If a mate of mine finishes a task or scores a goal, I can just say GG, and everybody understands it”*. In addition, the word “camp” is used as a strategy when playing games, as in “camp by the stairs” (watch the stairs). In real life, Martin explains, *“camping by the stairs”* means that is where they meet or hang out. *“I also use words from gaming like my tribe, guns and shoot, because they often make part of the story I’m writing”*, he continued. This is noteworthy, as the qualitative analysis found words such *scouts, tribe, gunshots, screaming* and *ridge* in the essay Martin wrote by year 9.

Frank claims that his writing tasks are at a higher level because he does not longer need to translate from Norwegian, but rather thinks in English. *“It just comes automatically. I can hear in my mind what is the correct formulation, so when I write I feel that the language is authentic because I’ve listened to real English conversations for so long”*. He was also asked if he had an example, and said: *“Before, I would write like, “There is no need for that”, whereas now I would say “That’s not necessary”. It’s not, like, Norglish (laughing), if you know what I mean. I feel like I need less words to say more”*.

Casper was not sure whether he could use what he learned from gaming in his writing tasks specifically, but he confirmed that he wished to learn English to succeed in gaming. Andrea felt like she could use a lot of her language acquisition from gaming in her texts. *“I write dialogs in my texts as often as I get the opportunity to do that, because then I can use different authentic expression or like slang from the gaming world. I wish I could do that in all tasks”*. Jens gives his gaming experience credit for his improvement in structuring sentences in his writing tasks at school. *“When you spend a lot of time daily listening to English experts, you get a better feeling of how things should be written, you know”*. Simon, in contrast to Jens, did not focus on the language aspect, but rather the plot. *“Not long ago we had a task about internet bullies. I got inspiration from gaming and the chatting-rooms I used to be part of. Sometimes, there is some bullying going on,*

but rarely. I made the real case a lot more dramatic in my text, but I got the inspiration from gaming". Simon further added that he wished that the writing tasks at school were more opened or centered towards gaming. He agreed with both Andrea and Jens, who expressed their wishes for more open or game-centered school writing task.

Lastly, findings from the interviews suggest that for the frequent players, the interest in learning English to advance in a game was "*absolutely one of the biggest motivations*" (Martin). They are motivated and inspired by the other player whose mother tongue is English and would like to communicate with the same ease. The less frequent gamers also found motivation in the opportunity to talk fluently while traveling or the ability to watch movies or YouTube clips while understanding every single word. In one of the essays written by Martin, it was found that the plot was inspired by a game he played at the time. When asked if they felt that they could use what they had learned from gaming in writing task at school, Martin said "*...I always bring with me words and expressions from the gaming world to the real life, you know. Sometimes, we joke around with the abbreviations, but honestly, I use a lot of what I learn in the writing tasks as well. Sometimes the story reflects a game I play*".

5 Discussion

5.1 Is there a connection between the amount of time Norwegian teenagers spend on gaming and their lexical richness in English?

The statistical results about the relation between the amount of time Norwegian teenagers spend on gaming and their lexical richness in English were all non-significant. However, as asserted, the collected data was deemed insufficient to conduct meaningful statistical tests. Therefore, in order to discuss the first research question, the emphasis will be on the results provided by the qualitative corpus analysis. Nonetheless, relevant parts of the statistical procedure will also be implemented in the discussion.

The examination of the six students' essays revealed that those who increased their gaming time from year 8 to 9 either improved or maintained the same scores both when it comes to TTR, LD and LFP and vice versa, with two exceptions. These were reasoned to because repetitive words are not included in the measures of LD, providing a wrong picture of the lexical richness. Although the LD score is high, we do not know if this is due to the frequent repetition of the most frequently used words, such as nouns and verbs. As stated earlier, there is no generally accepted definition of the term "lexical richness", nor is there an overall agreement on how it should be measured. Due to the weakness found in the qualitative corpus analysis considering lexical density, which is the proportion of all lexical words in the text, other significant measurements could have been more suitable. Daller et al. (2007) and Read (2000) suggest measurements lexical individuality (the quantity of words used by only one participant in a group). This should be kept in mind in further studies and is also noteworthy in possible statistical analysis of lexical richness if a larger N is provided.

In her latest study, Sundqvist (2019) found that time spent playing mattered more than what types of games the participants played when it comes to L2 vocabulary acquisition, where the knowledge of advanced words was measured using frequency lists. Similar results can be drawn from this qualitative corpus analysis, as those who reported to increase their gaming time to more than 5-10 or over 10 hours gaming from year 8 to 9, outperformed those who decreased or spent the same amount of time gaming in the use of advanced words. Although no statistical significance was calculated, the moderate and high frequent gamers had a lower range score when it comes to the use of advanced word in their essays. In fact, the range lowered along with the higher amount of gaming time.

Although speculative, this could mean that frequent gamers have an overall higher number of advanced words in their essays.

However, in the qualitative corpus analysis interesting results regarding advanced words were found. Although Andrea increased her gaming time from 1 to 1-4 hours, her LPF score decreased from 16 to 12 words. Her essays were examined, and it was found that many of the words marked as advanced were numbers (two, five, seven, six and three), as well as words such as mom and hello. Because numbers are some of the first things Norwegian pupils are taught, it is considered odd that they are counted as advanced words. Although comparable, this should also be noted regarding further quantitative vocabulary research operating with frequency lists.

No clear trends appeared through the corpus analyses regarding the type-token ratio in correlation to gaming. Because all texts were cut to 300 words, McCarthy (2005) points out that a comparison of one whole text with only half of another could occur. Therefore, the validity of the results provided might be questioned. Solutions to this problem of measuring TTR are of great interest for further language learning research.

5.2 Is there a correlation between the amounts of time Norwegian teenagers spend on gaming and their English essay grades?

As asserted, Sletten, Strandbu and Gilje (2015) found a connection between students' grades in English and gaming among 4000 students between the ages of 13-16 in Norway. They reported that although frequent gamers had lower scores in Norwegian and Math, they outperformed the non-gamers in English. The present study found similar results both in the quantitative and qualitative corpus analysis. There was a statistically significant positive correlation between gaming time and English grades, with two outliers. Again, because of the lack of more data, it is important to note that no regression analysis was conducted, meaning that we cannot trace if other factors were responsible for the gamers scoring higher on the essays. An analysis of regression is considered appropriate for this kind of study if the N is larger and would be particularly interesting if information about what kind of games the students engage in is provided. However, because of the self-reported information gathered before the conduction of the study, the results regarding the correlation between gaming and grades is deemed valid. In addition to being supported by earlier studies, the correlation was strong with the $p = .004$.

Nevertheless, it is beyond the scope of this thesis to discuss the reasons for the correlation, as it does not consider the assessment of written production.

In the qualitative corpus analysis, it was noted that the participants who increased their time gaming also improved their grades from year 8 to 9. Martin and Simon, who went from 1-4 hours of gaming to 5-10 from year 8 to 9, improved their grades significantly. Frank went from 5-10 hours to 10+ and had a small improvement from 5- to 5. Andrea, who went from 1 to 1-4 did not experience any change in her essay grade. These results can again be linked to Sundqvist (2019), who found that the most important factor for L2 vocabulary acquisition to be the amount of time spent gaming. Cobb and Horst (p. 25) found similar results when they instructed Francophone L2 English learners in Canada to play a mini game. They found increased speed of lexical access and improved vocabulary but concluded that the amount of time the learners spent gaming was vital for the progress. Furthermore, theories about deep learning say that it requires a prolonged commitment, one that can be acquired when people get heavily invested in a new identity (diSessa, 2000). We can thus assume that if Andrea had a bigger jump in her gaming time, a higher grade could be expected. Additionally, Jens, who reported to game 5-10 hours both years, improved his grade from 5- to 6/5, whereas Casper who went from 5-10 to 1 hours of gaming by year 9 subsequently achieved a lower grade. Based on these results, which are also supported by the students' beliefs gathered through the semi-open interviews, we can conclude that there is a positive correlation between the amounts of time Norwegian teenagers spend on gaming and their English essay grades.

5.3 Considering the longitudinal aspect, what are the gamers' attitudes towards gaming and language learning?

From the students' perspective, gaming is considered one of the activities where they believe to acquire most English. This is in line with how Gee (2007) defines good learning, as the students are not passive consumers, but feel actively engaged in the process while gaming. Furthermore, they seemed to be highly motivated to win in their respective games. Their aspiration to reach a high level in the game was also clear “... *additionally, I do a lot of gaming research on YouTube. If you want to be at a high level, you need to learn tips and tricks from others. I've noticed that my self-confidence in talking English has improved a lot, because I've been forced to both listen and talk in order to be really good (in games)*” (Jens). This eagerness to win is an essential factor for

language learning, as it brings motivation to the process. As mentioned earlier, Ortega (2009) states that motivation may be the deciding factor when it comes to acquiring a second language. His explanation of how motivation is the desire to start the learning process as well as the effort that sustains it is in line with Krashen's affective filter hypothesis, who further claims that language teaching that fails to inspire motivation leads to boredom and affects the acquisition negatively.

Another interesting implication of these findings was found in the participants' view on what kind of English they believe to acquire at school as opposed to in their spare time. Their overall understanding is that they learn grammar and "proper English language" (Andrea) at school, whereas they believe to acquire native like pronunciation and cool expressions that can be used in everyday talk through the communication they participate in through gaming. This perception can be interesting for teachers to be aware of when planning both lessons and homework in EFL classes.

When asked what they think they have gained through playing games in general, several different theories emerged. Again, motivation played a central role and was recognized as one of the main reasons for the learning. Interestingly, Jens reported that if a game required him to do research on his own he considered it as a part of the game. This statement about how learners spend time on gaming without the focus being on learning is called The Practice Principle by Gee. He writes "learners get lots and lots of practice in a context where the practice is not boring" (Gee, 2007, p. 68). Interestingly, the participants report to do research or watch YouTube clips in order to advance in the game, without considering it as learning. Furthermore, the participants reported that gaming was not something they "put off", like their homework, but rather looked forward to. From the teacher perspective, this is considered remarkable, as gaming can be implemented either in the classroom or as part of the homework given to enhance students' motivation.

Other factors such as faster responsiveness, cooperation, greater creativity and inspiration emerged from the interviews. All the informants also mentioned the communication with other players as an important element. Obviously, they found it to be essential to both gaming and language learning. Simon concluded, "*Isn't it obvious (that language learning is happening)?*" In fact, according to Gee, the only way to acquire situated meanings is when words are heard and used in interactional dialogues with people at a higher level than the student. Additionally, Gee continues, students need to

experience the actions to which the words apply. When this is done over time, the ability to build stimulations in the student's mind of how the words are used in different context will improve. The ideal place to practice this understanding of situated meanings is in video games, as they are "action-and-goal-directed preparations for, and simulations of, embodied experience" (Gee, p. 205). Games are a good area for language to be situated, because they give the verbal information "just in time" (Gee, p. 206), that is, when the player is ready to use it through meaningful action. Furthermore, both the SLA interaction hypothesis and Krashen's input hypothesis claim that the effectiveness of the input is increased when during the interactions the student receives input above their current level. Gee explains how such scenarios often lead the student to ask questions, request paraphrasing or use other strategies to overcome the difficulties and progress in communication. According to Gee, connecting words to specific actions in this manner improves the student's ability to build stimulations in their mind of how the words are used in different context.

All participants agreed that gaming-habits attributed specific to their English language knowledge. However, the emphasis was on the oral proficiency and their self-confidence when it comes to talking in class. Considering the numbers from the Norwegian Media Barometer that show that a total of 75% of men and women in the ages between 9-15 have played games daily between 2013-2017 and the finding from the interviews that show that the gaming-communication is mainly oral, this emphasis is not far-fetched. If we assume that those who report to play digital games daily communicate orally for at least one hour a day, it is likely to believe that they will outperform those who simply receive English input or communicate only in class. The responses provided from the interviews suggest that the frequent gamers believe to improve their oral skill and self-confidence, and these advantages gamers might have over their non-gaming peers can be of great importance for teachers to exploit. Previous research done on oral proficiency and gaming focuses on the virtual environments and are created by players who play multiplayer online games (MMOs) (2009:808). To progress in these types of games, players are often forced to communicate with other players. In Asia, Reinders and Wattana (2011) recorded Thai students while they were playing the MMO Ragnarok and looked for how much and how good the L2 interaction was, as well as the learners' eagerness to communicate. Over the course of three sessions, they found positive effects, as the participant both spoke more and more comfortably. However, it is not yet clear if

the language of communication in virtual environments is transferable to other contexts (Thorne et al., 2009, p. 810–811). Nevertheless, the findings from the semi-structured interviews in this study suggest that the participants believe to gain both confidence and skill through the frequent oral communication in gaming, and that they can transfer these skills to other contexts. All informants stressed the improved skill in oral communication, and Simon's response reflects their overall view "I used to be afraid to say something in English class, and my teacher said that I had to be more active. I hated it before. Now it's a piece of cake. I know how to answer questions and I don't need to prepare". Interestingly, only one of the informants mentioned the impact gaming had on his writing skills, but even he had to hear the construction in his head before he wrote it down.

Gaming is viewed as "*a world beyond the boring everyday life*" (Casper) and several students believe their virtual identities have given them new perspectives and increased their creativity. In their study in the US, Rankin et al. (2006) found similar results, as English L3 university students played EverQuest 2, a multiplayer online game where students have their virtual identities. Positive results regarding vocabulary acquisition were found, likely because of the interactions with non-playing characters in their virtual rooms. According to Gee, gaming encourages action and decision-making, giving the players the role as co-creators of the world they are engaging in. This possibility for the players to project their own fantasies and desires onto the character, and the commitment to a new identity is highly motivating. Findings from both the interview and the qualitative corpus analysis suggest gamers are able to transfer the creativity from gaming onto their writing tasks.

6 Conclusion

6.1 Implications of the study

No correlation between the amount of time Norwegian teenagers spend on gaming and their written lexical richness in English was found during the analysis of the corpus. However, the examination of the students' essays revealed interesting findings considering the measurements applied. Firstly, it was found that LD might provide a wrong picture of the lexical richness, because repetitive words are not taken into consideration. For further research other significant measurements should be considered, such as measurements of lexical individuality (Daller et al., 2007; Read, 2000).

Secondly, in the qualitative corpus analysis it was found that many of the words marked as advanced were numbers as well as words such as *mom* and *hello*. This was deemed odd and should also be noted in regard to further quantitative vocabulary research operating with frequency lists. However, it was found that the moderate and high frequent gamers had a smaller range when it comes to the use of advanced word in their essays. Because no statistical significance was calculated, these numbers are only speculative, but suggest that frequent gamers have an overall higher number of advanced words in their essays. In addition, those who reported to increase their gaming time to more than 5-10 or over 10 hours gaming from year 8 to 9, outperformed those who decreased or spent the same amount of time gaming in the use of advance words. Although supported by earlier research (Sundqvist, 2019), more data is necessary to confirm these results. Finally, no clear trends appeared through the corpus analyses regarding the type-token ratio in correlation to gaming, arguably because of the small sample size. Further research with a larger dataset and these findings taken into consideration is needed to investigate the connection between time spent gaming and written EFL lexical richness.

There was a statistically significant positive correlation between gaming time and English grades. Again, because of the lack of more data, it is important to note that no regression analysis was conducted, meaning that we cannot trace if other factors were responsible for the gamers scoring higher on the essays. Nevertheless, findings from longitudinal qualitative corpus analysis also suggest that there is a positive correlation between time spent gaming and English essay grades, as the grades followed the pattern of either increased, equal or decreased gaming time from year 8 to 9. Similar results were found in Sletten, Strandbu and Gilje (2015). Based on these results, which are also supported by the students' beliefs gathered through the semi-open interviews, we can conclude that there is a positive correlation between the amounts of time Norwegian teenagers spend on gaming and their English essay grades.

As for the students' attitudes towards gaming and language learning, gaming is considered one of the activities where they believe to acquire most English. To that, they add several other benefits, such as faster responsiveness, cooperation, greater creativity and inspiration. Nevertheless, all participants agreed that gaming-habits attributed specifically to their English language knowledge. However, the emphasis was on the oral proficiency and their self-confidence when it comes to talking in class. All informants

also mentioned the communication with other players as an important element. Obviously, they found it to be essential to both gaming and language learning. Nevertheless, the findings from the semi-structured interviews in this study suggest that the participants believe to gain both confidence and skill through the frequent oral communication in gaming, and that they can transfer these skills to other contexts. They are motivated and inspired by the other players whose mother tongues are English and would like to communicate with the same ease. The less frequent gamers also found motivation in the opportunity to talk fluently while traveling or the ability to watch movies or YouTube clips while understanding every single word.

In addition, findings concerning the motivation behind gaming suggest that EFL teachers in Norway should be aware of the possibility to implement gaming-related activities either in the classroom or as homework to enhance some of the students' motivation for learning English as second language. Furthermore, some of the informants in the interviews reported a desire for more gaming-centered or open school writing tasks, as they believe it would give them a greater opportunity to show knowledge gained by gaming. Considering the pedagogical perspective, this is remarkable, as such construction of tasks could be an easy way to enhance motivation and give room for the gamers to show their knowledge. Additionally, several learning strategies used by the students' when encountering new words during gaming were identified. Although most of them understand the words based on the context, other tools such as Google or asking for paraphrasing or explanations were also mentioned in the interviews. This suggests that these gamers are good at reflecting upon their own language learning, which is a skill that EFL teachers seek to implement in their students.

Although the results from the quantitative analyses are not concluding due to the sample size, they can certainly be consideration for further research. The qualitative data, on the other hand, is vital in the discussion about how gaming activities can potentially improve English proficiency. Not only did the informants have positive things to say about their own gaming experience in correlation to learning, but they do not distinguish between gaming and other activities that can be related to the game. They talk to other players in English, do research in order to advance in the game and watch English videos on YouTube, considering it part of the hobby. In other words, they are seeking opportunities to improve their English skill while they are having fun. A greater insight in

this culture that reaches far beyond the game itself could provide better understanding of how Norwegian pupils acquire English through gaming.

6.2 Limitations and further research

There are several limitations to the present thesis, such as the already mentioned small data sample concerning the measurements of lexical richness. Although the TTR, LD and LFP scores were used to calculate possible differences between pupils with different gaming habits, the constructs of the quantitative corpus analysis are possibly limited because of the narrow dataset. However, the procedure and the numbers were kept, as they can possibly be used for further studies, where a larger collection of data is believed to provide meaningful statistical tests. Trends that appeared through the descriptive data from the quantitative corpus analysis were nevertheless implemented in the discussion along with results from the qualitative corpus analysis and the interviews.

Given the fact that all student information is subjective, caution in the interpretation of the results should be taken, as the participants themselves reported all EE activities and gaming habits. Even though the students are honest, it could be hard to recall how much time is spent on different activities in the past. For further studies a language diary is suggested, as it provides a daily update for a couple of weeks and can possibly create a more correct picture. Nevertheless, the interviews confirmed that the numbers reported by the students were accurate.

Additionally, data from the interviews suggest that the communication form in the gaming culture has developed from being primarily written to becoming mainly oral. Although the impact gaming can have on students' lexical richness is interesting, further research on how gaming may potentially be related to students' oral proficiency would also be of great interest.

It is also important to note that this study does not differentiate between different games which may provide different amounts of input, both text and speech. This is possibly a limitation, as nor the English input or output can be measured accurately. Further studies investigating players' interaction in different game types in a qualitative manner is recommended, as the broad gaming category makes it challenging to connect different language gains to different factors. It would also be interesting to explore the specific vocabulary used in different digital games.

There are several pedagogical implications drawn from this study, but further research regarding the approach teachers should take to encourage learning through digital gaming would also be a welcome contribution to the field.

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Appendices

Appendix 1

Topic formulation and instructions year 9:

Informasjon om prøven	
Prøvetid	Prøven varer 5 timer
Tema	Shadows of the Past
Hjelpemidler	Alle hjelpemidler er tillat, bortsett fra internett og andre verktøy som kan brukes til kommunikasjon. Oversettelsesprogram er ikke tillat.
Bruk av kilder	Dersom du bruker kilder i svaret ditt, skal de alltid føres opp på en slik måte at leseren kan finne fram til dem. Det er fint om du bruker fotnote. Du skal føre opp forfatter, fullstendig tittel på både lærebøker og annen litteratur og sidetall. Dersom du bruker utskrift fra internett, skal du føre opp nøyaktig nettadresse og nedlastingsdato.
Informasjon om oppgaven	Prøven har 3 oppgaver: Task 1, Task 2 og Task 3. Du skal svare på alle tre oppgaver, to som krever kortere svar og en langsvarsoppgave. Task 1 og 2 (short answers), har en oppgave med utgangspunkt i tekstvedlegg (unknown text) som ikke er i forberedelsesmaterialet. Den vedlagte teksten er innenfor temaet for prøven. I Task 3 (long answer) skal du velge en av oppgavene, husk å skrive tydelig hvilken oppgave du har valgt.
Praktiske opplysninger	Å presentere fagstoff, å bruke estetiske virkemidler og å utforme tekster er en del av kompetansekravene i engelskfaget. Du velger selv hvordan du best kan vise mottakerbevissthet og få fram hensikten med tekstene dine. Det gjelder også skrifttype og skriftstørrelse. Bruk skriftstørrelse 12 og linjeavstand 1,5. (Arial, Calibri, Verdana og Times New Roman har god lesbarhet.) Husk også topptekst og sidetall x av y.

Task 3. Long Answer

Choose ONE of the tasks below.

- Based on the text "The Ruin of a Culture" in Crossroads 9A, write a text about the first encounter between the Native Americans and the White settlers. Facts or fiction. Give your text a suitable title.
- Look at the picture below. Write a text inspired by the picture about feeling like an outsider. Give your text a suitable title.



- When you were clearing up the attic the other day, you came across an old letter. It was written by your great, great grandfather. He witnessed the *Trail of Tears* and he wrote a letter to his father about it. It is full of detailed descriptions of the tragedy. The letter is written in Norwegian. Write it in English. Give your text a suitable title.
- You are a former slave who escaped to freedom two years ago and you are now going to write your autobiography. You might like to include information on where you were born, your daily routines, your longing for freedom, love and escape. Give your autobiography a suitable title.

- e. You live in a country where you are being discriminated against because of the colour of your skin, your religion or your sex. Write an article for a newspaper / magazine. Discuss and reflect. Give your article a suitable title.
- f. Look at the picture below. It is called *Moving Day* and painted by Norman Rockwell. Create a text where you tell the story from the point of view of one of the children. Make sure to include insight about American society at the time. Give your text a suitable title.



- g. *Shadows of the Past* is based on periods of racism in history, do you see any similar situations in the present. Discuss. Give your text a suitable title.

Topic formulation and instructions year 8:

Informasjon om prøven	
Prøvetid	Prøven varer 5 timer
Tema	Friends
Hjelpemidler	Alle hjelpemidler er tillat, bortsett fra internett og andre verktøy som kan brukes til kommunikasjon. Oversettelsesprogram er ikke tillat.
Bruk av kilder	Dersom du bruker kilder i svaret ditt, skal de alltid føres opp på en slik måte at leseren kan finne fram til dem. Det er fint om du bruker fotnote. Du skal føre opp forfatter, fullstendig tittel på både lærebøker og annen litteratur og sidetall. Dersom du bruker utskrift fra internett, skal du føre opp nøyaktig nettadresse og nedlastingsdato.
Informasjon om oppgaven	Prøven har 2 hoveddeler: Part A og Part B . Part A har Task 1 og Task 2 . Du skal svare på både Task 1 og Task 2. Part B har sju langsvarsoppgaver. Du skal velge en av sju oppgaver. Du må skrive tydelig hvilken Task du har valgt.
Praktiske opplysninger	Å presentere fagstoff, å bruke estetiske virkemidler og å utforme tekster er en del av kompetansekravene i engelskfaget. Du velger selv hvordan du best kan vise mottakerbevissthet og få fram hensikten med tekstene dine. Det gjelder også skrifttype og skriftstørrelse. Bruk skriftstørrelse 12 og linjeavstand 1,5. (Arial, Calibri, Verdana og Times New Roman har god lesbarhet.) Husk også topptekest og sidetall x av y.

Part B

Choose ONE of the following tasks.

You should write at least 300 words. Remember that you must write in your own words. Write the number of the task you choose. Also **remember to give your text a good title!**

1. Louise from New Zealand in "Spare Time and Friendship" wants to change things when she grows up. You are a journalist and are interviewing her for a youth magazine. Remember to include descriptions (skildringer) in your interview. Give your text a good title.
2. Give your text a specific geographical setting in an English speaking country. Write a story about friendship. Give your text a good title.
3. They used to be the best of friends. Circumstances in their lives have caused them to lose contact. Many years go by. Suddenly, on a business trip abroad, they are standing face to face. Write the story about lost friendship. Give the text a good title.

4. A seventeen-year-old boy takes his father's car out for a spin without his father knowing it. He does not have a driver's licence and he is a very poor driver. He picks up a couple of friends and off they go. Write a story about what happens. Give your text a good title.

5. Give your story a specific geographical setting in an English speaking country. For two long years you have been chatting with a friend on the internet. You are invited to spend your summer holiday at her/his home. Right now your flight is going into landing and you can hardly wait to finally meet your friend in person. There are so many things you want to see and experience together with your friend. Write your story. Give your text a good title.

6. You are very positive and enthusiastic about the youth media project "Children's Express". As a journalist you are writing an article for a youth magazine about the project. First, give some short background information about the struggles between Catholics and Protestants in Northern Ireland. Secondly, explain briefly what "Children's Express" is by including a short interview with one of the children engaged in the project. Finally, discuss how and why the project is important in creating new bonds of friendship and thus making the world a better place to live in. Give your article a good title.

7. Imagine yourself being Danni in the text "Danni's Goodbye". Right the story from Danni's point of view. Give your text a good title.

Appendix 2

Corrections

Student	FRIE	SHPA
P60200	A-I x2 God-Good Winding, removed, used wrongly Hey-hi	A sleep - asleep
P60201	Vent-Went Inn-In x3 Groud -ground Resturant-Restaurant God-Good Cheer-chair Still removed due to wrong use Seid-said	An-and x2 Pusch-push Down't-Do not Sayd-said Get's - gets
P60202	Butterfly's-butterflies	Borrowing was removed, wrong use (carrying). Oh was removed
P60203	There-their Scrathsing-scratching Opned-opened Were-where Slowlig-slowly Creatur-creature Hade-had	Stock-stuck
P60204	Peep, ouch, wow, heesh noofing, OMG removed.	To-too Shhh, removed
P60205	Tai-tie Raaaaah, raaaaaah, ahhhhh, oh removed. Now one - no one Jet - yet Co-operate - cooperate Wan-won	Quit-quiet Evan-even Thought-though Shud-Should x 2 Sais-says
P60206	No corrections	Clothe-clothes Waternose-Waterhose Majestik-Majestic
P60207	By-buy Rode-road x2 Flyes-flies Gone-gonna x2 Shoes-shows	Summing removed, used wrong (buzzing) Fuggy-foggy Breath-breathe Here-her x2
P60208	Removed hyphen between sailing-boat, fishing- luck, internet- friend and t-shirt (last because of the formatting in the program) Whit-with Removed fly, wrong use	Flyed removed, does not show that they know the correct form (flew) Jes-Yes Plase-Placed
P60209	Removed a.m and p.m, the program removes it automatically Hey-hi	Ehhh, removed Hey - hi
P60211	Hey-hi	Wright-write
P60212	To-too I-in	No corrections Word count: 300
P60213	No corrections	No corrections
P60215	Removed huh, uhhhhmmm, mhhhhmm, oh	No corrections

Appendix 3

Interview guide:

1. Hvor opplever du at du lærer mest engelsk?
 - På skolen
 - På fritiden
 - Netflix, gaming, lesing?
2. Hvilke tanker har du om digitale spill og læring generelt?
 - Har du lært noe av å spille?
3. Hvilke strategier tar du i bruk for å kommunisere i forskjellige spill?
 - Hvordan foregår kommunikasjonen og bruker du hjelpemidler?
4. Opplever du at gaming bidrar til at du mestrer det engelske språket bedre?
 - På hvilken måte?
5. Får du brukt det du har lært ved å game når du skriver engelsk på skolen?
 - Føler du at oppgavene gir rom?
 - Hvordan kunne du fått vist mer kunnskap?
6. Er du interessert i å lære engelsk for å bli bedre i spill?

Appendix 4

Students' texts:

Y8 Frank

I cannot see anything. Everything I can see is white, just white, like a **blank** piece of paper. Why? Why cannot I see? Why cannot I feel? Why cannot I hear? Why cannot I talk to someone? What have happened? I do not understand... I am smelling something, it reminds me of something, but I do not know what. I am starting to hear, but only a high **squeaking** sound. It hurts, but it is positive in one way, because that means maybe I can hear again. This **disturbing** squeaking sound is still here, but not as high as it was. someone said. I can hear something, but I cannot hear clearly what he says because of that squeaking noise. It is like the words is mixed. A happy feeling flies through my body. I am starting to feel, but not a good feeling. It is pain. The pain comes from my neck. I cannot feel anything under my neck. I cannot describe this feeling. It is so **weird**. It starts getting yellow. Not ordinary yellow, but more like a **flashlight**. What is happening?! I am starting to see! I can see a head, but I do not recognise it. Everything is **blurry** and **silent**. Now I see where I am. I am at the hospital, but why? I do not remember. I can see **mom** and dad crying right next to me. You are alive! Mom says while she is **sobbing**. I can see and hear more clearly now. I saw that the third person in the room was a doctor. I see down at my legs. I am shocked of how **bloody** and destroyed they are. I cannot speak out **loud** yet, because I cannot open my mouth for some reason. Now I remember this smell, it is

Y9 Frank

Hello, it is me. I have been through so much pain the past year, but I got through, but just **barely**. They came and took our horses, children and food supplies, and pushed us **westwards**. They did not ask for our opinion to move or not, they just forced us away. We did not have a lot of water or food supplies, so a lot of us died because of that. When the winter came, we did not have a lot of clothes so it got extremely cold. All of this was terrible for us, and it was almost **hopeless**. It was a long **painful** journey. So, there was this one night, when we all slept good, and dreamed **peacefully**. Everything was as it was supposed to, but suddenly we woke up, and heard horses coming in an **unbelievable** speed. They shouted with all of their voices: THEY ARE OVER HERE! We did not really know what was going on, but when we heard shout: GIVE ME MY BABY BACK, I picked up my **bow** and **arrow**, and **whispered** to my family Stay here, and be as quiet as you can. They looked at me and **nodded**. While they were in our tent, I got out of our tent **quietly** and looked around. I saw that they took our children, and destroyed someone's tent. I could not do anything. They were too many, and we was not prepared. At this point, I heard people shouting, and **screaming**, but I knew that I could not do anything. That was **tragic**. I quietly went inside our **tent** again with a bad **conscience**. I really wanted to help our people, but it was just hopeless. It is hopeless, we just have to wait, and **hopefully** they will not find us, but if they

Y8 Andrea

Dear diary. I am so excited to meet my **internet** friend! We have been **chatting** for **two** long years now, and it is a good feeling to know that I am going to meet her now. Or, it is about **five** hours until she is landing on, on the island, capital and the largest city in the. It has above residents, and a lot of **dolphins**. is one year older than me, and she is so beautiful. She has brown hair, blue and green eyes and **chocolate** skin type. She is sending me some pictures now of where we are going to live this week. It is a small **cabin** right by the sea. It has a bridge and a big **sailing** boat with fishing **rods**. She says that we are going to fish every day to get food, and that is ok because I like fishing. I used to do it with my father. And I promise you, I have a big fishing luck. I have all kinds of feelings now. Ok, let us start of the beginning. I landed on the **airport** right above **seven** a clock, and the first thing that hit me was the heat. I never thought it could be so hot in a human- living place. I got out of the plain and down the **stairs**. was waiting for me inside, and she did look like I had seen on the pictures. She was wearing a white **tshirt**, a pair of big **jeans** with lots of holes, and a **caps**. She looked around and suddenly she saw me. We just stood there and smiled to each other. It was so **awkward**. A man pushed his way ahead, and I almost fall. saw it all and ran to me. She asked if I was

Y9 Andrea

I moved from to in when I was **six** years old. Now I am years old, but I will never forget how it changed my life completely. The reason we moved were a farm in dad wanted to buy. Without my mom's and my older brothers **permissions**. He just told them, whether they liked it or not. Do not get this wrong. My dad is not a bad father or husband, he just want the best for us all. You see, he wanted a better paid job, so me and my brothers could go an school. In he could get that. Anyway. We from to. We bought a little black **ugly** car, and drove to the small farm in. When I first saw the farm, I began to cry. Is this true? Do I really have to live in this **dirty** place?! (Yes, I was a really **spoiled** child.) The farm was much bigger than I thought. It was only the houses who were small. The first weeks we had to clean the houses and fix A LOT of things, like a **fence**, holes in the **garage roof**, and so on. After about a month I started at school for the first time in my entire life. And (my brothers) had already started **three** days ago. My **mom** went with me and on the bus. went on the bus to the high school. We were the first ones in the bus, and the bus driver did not even say **hello** to us. He just took the money and drove. We had to quickly sit down to not lose the balance and fall. After a while the bus driver stopped, and a lot of people on my age with their parents got on. They all **stared** at me, mom and. No

Y8 Simon

was on a business trip to on a big and nice ship. Then Suddenly he saw his best friend in high school. And all of his memories came back into his mind. What is up it has been a while. Yeah I have missed you, with his eyes looking away like he did not care said. Are you still mad for that thing that happened in high school? BROTHER YOU STOLE MY GIRLFRIEND, HOW CAN I NOT BE MAD! That is Several years ago come on why cannot we be friends like in middle school. When we had plans that we were going to steal candy from kids and take over House. That was in the past, Things we have said in the past will stay in the past. You are still my friend I said. NO I AM NOT, WE WERE NEVER FRIENDS AND WE ARE NEVER GOING TO BE FRIENDS. Relax brother, do you need a chill pill? Because I got one in my bag. You will never change, Same bad jokes said. Why are you so mean to me? is here you know? WAIT what, she is on this boat? said with his face like he saw a model naked. Yeah, she is, I laughed. Why is she on this boat?. I forgot to tell you, she is my partner, here she comes. She came and hugged me and said to you seem familiar, have I seen you? Do not you remember me? I was your boyfriend in high school. was my boyfriend in high school, although I did have a boyfriend before, but he was just so annoying and so clingy. He was so ugly that I could Yeah Yeah, but that was in the past you do not need to bring that up now I

Y9 Simon

My name is. Most of you know me as, Host of the biggest channel in the. I am going to tell you about my childhood. I wrote a diary when I was a kid. It all started when I was years old in. Me and my family were from and we just moved to the months ago. We lived in a city called. The city was quiet and peaceful. High school starts in days and my parents got me in a school that has a lot of bad feedback, but that school is the only one that has space for new people. I am very nervous that the kids there will not like me. Today is the day I am finally starting school. My mom is giving me a ride to school. We live minutes away. It feels like I have butterflies in my stomach. I see the school in my sight. I walked out of the car and saw a lot of gangs. The meters from the car to the school doors felt like km. All the eyes were at me, the new school boy. I tried to have a serious face, but it was hard when everyone was looking at me. I opened the school doors and went inside. I walked slowly inside then I see this overhyped teacher that jumps at me. She scared the living crap out of me. Hello!! My name is and I will be your teacher. Here take this, the code is, she said. She gave me a locker and the code for it. The school bell rings. I went to the classroom and opened the door. No one was there except the teacher. I found a seat and hoped no one sat there. minutes after the bell rang they all came in.

Y8 Jens

The plane was slowly **tilting** towards the ground. My **stomach** was turning around while we went up, down and in addition **sideways**. It was like a **roller coaster** but with no track under it. This roller coaster mixed with the terrible food in the plane was not an **incredible** good combination. The **nausea** I had in that moment was so bad, I nearly puked but the plane released the **airbrakes** and hit the **runway** so the **puke** was literally pressed back in my **throat**. The feeling was not the nicest I have ever felt, but I managed to hold myself until the plane stopped completely. The whole seat in front of me was covered in yellow **nasty** stomach **acid**. Everyone around me **stared** at me with very **suspicious** **glances**. Of course when the silence was deep the one who broke it was the pilot over the speakers with the voice nobody understands: "We have now arrived at international **airport**. The temperature outside is currently degrees with sun. We hope everyone had a great flight with. Thank you" After all the excuses and explanations to the flight **attendants** and meanwhile some mad looks from the rest of the guests I could finally go out of the plane door. The Temperature hit me straight in the face. I was shocked of how warm it could be on this **tropical** island. I walked with my eyes closed towards the airport just to enjoy the sun. The fun was over when I **stumbled** in the **staircase** and looked like a complete **idiot**. was standing **beside** the **conveyor belt** where you take your **luggage** out. I met on a **chatting** site a few years ago in the **meantime** we became good friends when we started talking on the. He shouted "Hi, how is it going?"

Y9 Jens

I was **born** in in. I am writing this when I am years old, in **reflection** of what has happened in my life I am lucky to be where I am right now. All those years living at the plantation in **slavery**. Especially the escape from was not a walk in the park. Many I met and got to know, even my own sister I had to leave behind for the freedom I have today. All those memories are **floating** in my head right now. This is the story of a year old **slave**. The first years I do not remember much from. It is all just a **blurry** **mess** of events. I can however clearly remember one time when I was about years old Me along with my sister and several other slaves were being **stripped naked** while **inspected** by men in coats. One of them said Fine boy this one, He is growing up to be a strong man. He looked at me and smiled. Yes, is his name. I want a starting **bid** on Fifteen **Hundred** dollars on him and his sister said another man with an **elegant** hat. Everybody in the room gathered in a circle around me and my sister, the man with the hat stood in the middle. Suddenly he **yelled** who wants to do a starting bid at fifteen hundred. All of the men in the circle raised their hands. During all the years at the **cotton plantation** under the leadership of I wrote a **diary**. One of the old slaves at the farm had been a free man before. He taught me in secret how to write simple, however not more than that. If I told any white man, the I could write I would get one hundred and **twenty whips**. So

Y8 Martin

Hi my name is i am years Old. I live With my dad, mom and Brother. I play on my pc. One day i played a Player did come over to Me and Said hi. I said hi back, we played together for years and now he wants me to meet him. He asked if I wanted to join him on the Holiday. week after, they were right out side the house. I said bye to my mom and dad, my brother were on his room. after a hour we stopped, I saw a nice cabin. said there are we gone live. Yes i said. We ran out of the car and stopped at the cabin. I saw his parents walking another way. I asked were they are going. He said they have their own cabin, This is mine. I have two computers, we can play or. But I do not have. No problem I have. We walked is side and it was big. We began to play, we played the whole night. After that we heard a strange noise. It was like someone was scratching on the door. Then the light went dark and we heard the door opened. I said Where are you, I said it very low. He said right over here. I slowly began to walk over. Than I saw a creature that I have never seen. It had long big eyes and a long body. I was on the floor. The thing saw me and made a big noise. It punched me and everything went black. I woke up in my bed. It was a dream. But then I saw the door was open and was on the floor. I saw that half of my body was gone. And after that creatures came in and

Y9 Martin

it was early in the morning and I woke up by someone saying you need to wake up. it was my little sister that woke me up. I saw out the opening of the tent and that people were already awake and began making the breakfast. here in our tribe we have breakfast together. I got my clothes on and walked out. when I walked out I saw my father with the fire making corn with bread. I walked over and met him with a smile. But he did not smile back. I asked what is wrong. He answered the other tribe hours away has been attacked. by who He answered I do not know with a sad face. I walked away and was on my way to my tent again. but I did not come that far before one of the scouts that was on the north ridge came down screaming they are coming! the people in our tribe started panicking. But my father got everyone to calm down. He said we do not know if they know we are here, maybe they just walk past our camp. Nevertheless he was wrong. Suddenly I heard gunshots and people screaming. I grabbed my sister and ran. My friend that ran beside me got shot in the head and fell

Y8 Casper

One day a boy named (That is me) was going to do something that would change my life! I woke up from my sleep at around a.m. I did not wake up from my **alarm** clock, but my **mom** woke me up, and **yelled** at me because I did not wake up on my own. The first thing that I thought about was that I had forgotten my **homework** (Again) that was due today! I was getting very **anxious** if I did not have the book to write in or the reading book. So I went and checked my **backpack**, and I saw on my schedule that I did not have any homework this week, I got very happy, so I did not have a reason to be anxious. I got dressed, then I went **upstairs** and started eating, but suddenly I heard a car coming up my **driveway**. I got to the window and saw the coolest and finest car I have ever seen. A, not only a, but a **pink**. I was thinking if dad had gotten it for me. It was not my **birthday** because I was **born** on the first of and now it is in, not even close to, because it was in the middle of summer break. I heard my dad open the door to the house, when dad came up, I ask if the car was for me, and dad said something that made me very sad, No, it is my car, not for you, but I got you something better, a that is as good and cool as my. What colour is the then?’’ asked I in an angry tone. ‘‘it is the best colour in the world, it is half black and half dark green’’ said dad like it is the

Y9 Casper

woke up by the sound of his **alarm** clock. He opened up his eyes and saw the bright light coming through a little hole in the **curtains**. He closed his eyes and just waited, and waited and suddenly his mom came in the room, opened the curtains in his room so all the **sunshine** came through. It was hard to block out the light he thought. He had forgotten to make food to school that he did not want to go to, but he could not say to his **mom** that he did not want to go to school. He waited for his mom to go **downstairs** so he could change clothes. He came to the **bathroom** to get his **socks** and **underwear**. After he had change he went downstairs and started to eat. When finished eating he got up and washed his face with cold water and **brushed** his **teeth**, he got dressed and went to get his bike, when he understood that his bike was **trashed** with eggs and **toilet** paper. Under all the toilet paper he saw a sign or a note were it said You do not deserve this expensive bike, so got the water **hose** and washed his bike with water so he could get to school in time before the **bell** rings and he gets to late. When he arrived at the school he saw that he had plenty of time to **spare**, so he went to his favorite place at the school, that was next to a big and **majestic** tree right next to a little lake with **frogs**, **toads** and **ducks**. He sat next to the tree and just looked at the beautiful lake. The bell rings and he **hurries** away to the school, he has to **crawl** under a big metal