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Abstract

This thesis is a study on Norwegian sixth graders' extramural English (EE) habits and their English vocabulary acquisition. The main aim of the thesis was to map Norwegian sixth graders' exposure to EE, the types of EE activities the pupils were engaged in, and how a high amount of exposure to EE activities could possibly relate to vocabulary proficiency in English. In addition, the pupils' attitudes towards English and beliefs about their own learning of English were in focus.

The data for the study was gathered through a mixed methods approach. More specifically, a language diary, a vocabulary test, and a digital mixed questionnaire collecting both qualitative and quantitative data were used in this study. The study was conducted on 45 sixth graders, and as a result of the changing climate of Covid-19, the data was collected at only one urban primary school in Norway.

The study identified a pattern that showed a relationship between high EE exposure and the pupils' English vocabulary proficiency. Yet, some EE activities might be more beneficial for L2 vocabulary acquisition than others. The findings also revealed that on average the pupils spent roughly 25.1 hours per week on EE activities. However, it should be noted that this number may be exaggerated, as the reported data relies on self-report from younger learners, and, therefore, it would be reasonable to assume that some estimates could have been approximate. In addition, the majority of the pupils in the study believed they learned most of their English outside of school, and that EE activities were the most important type of activities for them to develop their English skills. Among the reported EE activities, playing digital games was the most popular activity, followed by TikTok and watching (films, TV series, and videos). In contrast, reading turned out to be the least popular activity. Lastly, the data demonstrates that attitudes and beliefs might relate to the learner's English proficiency.

This thesis has contributed to a growing body of research on the benefits of EE, which has so far been more extensive especially in the Swedish context (Sundqvist, 2009; Sundqvist & Sylvén, 2012, 2016; Wickström & Sundqvist, 2015). However, in Norway, there are still only a few studies conducted on the topic (Jakobsson, 2018; Dahl, 2019; Reda, 2019). To the best knowledge of the researcher, this thesis is the only study concerning EE and its benefits on younger language learners in the Norwegian context. The thesis has along with other research studies acknowledged EE as a factor influencing English language acquisition, especially English vocabulary acquisition. Having knowledge about EE and its potential influence, if used correctly, it could help English as a Foreign Language (EFL) teachers in optimizing their

classroom practices for the specific needs and interests of their pupils, which could, in turn, make the EFL classroom more motivating. As research has shown, motivation is a prominent factor for successful foreign language acquisition (Krashen, 1982; Dörnyei, 2005; Sundqvist, 2009).

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1.Introduction

1.1 The present study, its aims, and research questions

This master thesis is a study of Norwegian sixth graders' extramural English (EE) habits, with the purpose of exploring the possible relationship between the amount of exposure to EE activities and the pupils' English vocabulary proficiency. The thesis also aims to shed light on the pupils' attitudes to and beliefs about English learning.

The process of globalization has given today's school children an enormous opportunity to develop their English skills at a whole new level than previous generations. The use of EE activities such as playing digital games, reading books, listening to music, watching films and TV series in English are all activities that could influence the pupils' second and foreign language (L2) proficiency (Sundqvist,2009). Sundqvist and Sylvén (2016) define extramural English as:

" English that learners come in contact with or are involved in outside the walls of the classroom. This contact or involvement is not initiated by teachers or other people working in educational institutions; the initiative for contact/ involvement lies with the learner himself/herself or, at times, with someone else, such as a friend or a parent" (Sundqvist & Sylvén, 2016, p.6)

In other words, EE is the English that learners engage with in a non-educational context. Thus, this thesis aims to answer the following research questions:

1. Which EE activities are the most frequent among Norwegian sixth graders?
2. In what way do the sixth graders believe they learn English the best?
3. To what extent can the sixth graders' attitudes towards English and their beliefs relate to their English vocabulary proficiency?
4. Is there any relationship between the amount of time spent on EE activities and the pupils' English vocabulary proficiency? If any, is it positive or negative?

A mixed methods research design was used to answer the above research questions. The data was collected through a language diary, a digital mixed questionnaire, and a vocabulary

test. The research was conducted in a Norwegian primary school. The participants were 45 primary pupils at the age of 11-12.

In the past, teachers were probably one of the most important sources to get in contact with the English language. Having worked as a substitute teacher for several years, the researcher has discovered that viewing the teacher as the primary source for exposure to the English language is no longer the case. English is everywhere, and the pupils are exposed to and are engaged in English language activities on a daily basis. This happens through movies, TV series, social media, literature, gaming, and various sources on the internet such as for instance YouTube and Tik Tok.

Since the researcher had the opportunity to observe how younger learners engage in the English language, it inspired the researcher to look into how such activities could possibly relate to the pupils' English development and their English vocabulary in particular. Sundqvist's (2009) PhD on extramural English, conducted on English learners in the Swedish context, inspired the researcher to investigate this topic to a greater extent in the Norwegian context.

English has become the world's lingua franca as it enables people all over the world to understand one another regardless of cultural and ethnical background. Due to its huge influence, more and more people all over the world are speaking English. Therefore, it has become important to learn to be proficient in English in many countries. The main goal of the study is thus to develop deeper knowledge and a better understanding of young learners' EE habits and beliefs about English learning, and how their EE habits, such as playing digital games, listening to music, watching English movies, and reading English books could potentially relate to their English vocabulary proficiency.

1.2 Relevance of the study

In essence, this study attempts to widen one's understanding of the benefits of EE, in order to evaluate if there is any relationship between EE and English vocabulary proficiency. This study aims to contribute to a better understanding of the EE habits among Norwegian younger learners. Additionally, the study may help expand knowledge within the field of EE in the Norwegian context. Previously, little research has been conducted on EE in Norway, in comparison to other countries, such as Sweden. Furthermore, a common trend for the research studies that have been conducted in Norway is that they have mainly been focusing on older language learners. However, in Sweden, the age groups have been a little more varied.

To the best of the researcher's knowledge, there has not been done any research focusing on how younger learners' EE habits might influence their English vocabulary proficiency in the Norwegian context. Therefore, this research should be conducted to widen one's understanding of how EE activities could potentially help promote vocabulary acquisition, which could help EFL teachers facilitate their practice so that it is suited for the learners' needs and interests.

Furthermore, the English subject curriculum (LK20) in Norway is divided into four basic skills: (1) Oral skills, (2) Written skills, (3) Reading, and (4) Digital skills. For this particular study, digital skills are the most relevant. The English subject area regarding digital skills concerns skills such as: "The ability of using digital media and resources to strengthen language learning, acquiring relevant knowledge in English. The development of digital skills in English, progresses from exploring the language to interacting with others, creating texts and acquiring knowledge by obtaining, exploring and critically assessing information from different language sources" (LK20, 2019). Although these skills are relevant for language learning, it does seem to mainly focus on formal learning as opposed to informal and incidental learning. This thesis can therefore shed light on the potential benefits of EE activities, which could help modernize the future English subject curriculum and the topics being taught. Additionally, a wider picture of the benefits of EE might help EFL teachers better understand their pupils' interests and needs, which could help EFL teachers create more fruitful and motivating classroom situations.

1.3 Outline of the thesis

Chapter 1 introduced the study, its aims, and research questions, as well as the relevance of the research project. Chapter 2 presents theories on second language acquisition (SLA) that are related to EE, theory on vocabulary acquisition, as well as providing a summary of previous research on EE. Chapter 3 gives a description of the research design, participants, the research tools that were used in order to collect the data, the validity and reliability issues, and the ethical considerations that had to be taken into account. Chapter 4 presents the findings obtained from the pupils' questionnaires, the language diaries, and the vocabulary test. Chapter 5 discusses the findings presented in Chapter 4 and answers the research questions. Finally, a brief conclusion and recommendations for EFL teachers are given in Chapter 6, followed by implications for further research.

2.Literature review

2.1 Introduction

In this chapter, the theoretical basis for the present study is provided to help the researcher to better understand and interpret the coming results of the study. Additionally, a summary of previous research on extramural English is likely to contribute to a more profound understanding of the topic.

The chapter is divided into five sections. Section 2.2 discusses the term extramural English (EE) as this term is central in this thesis, while Section 2.2.1 looks into terms related to extramural English. Section 2.3 discusses the field of SLA in general, while Section 2.4 looks into theoretical perspectives within the field of SLA that are related to EE, as well as describing the main differences between intentional learning and incidental learning, also known as implicit and explicit L2 learning. Section 2.5 deals with theories on vocabulary acquisition. In particular, Sub-sections 2.5.2 and 2.5.3 discusses the impact reading and spoken input has on incidental vocabulary learning which both are relevant for EE. Section 2.6 gives a brief overview of previous research conducted on extramural English, while Sub-section 2.6.1 addresses playing digital games as an EE activity.

2.2 Extramural English learning

The term extramural English (henceforth EE) was developed by Sundqvist (2009) in her PhD dissertation. Sundqvist and Sylvén (2016) define the term as follows:

" English that learners come in contact with or are involved in outside the walls of the classroom. This contact or involvement is not initiated by teachers or other people working in educational institutions; the initiative for contact/ involvement lies with the learner himself/herself or, at times, with someone else, such as a friend or a parent" (Sylvén & Sundqvist, 2016, p.6).

In other words, the term refers to English learning in a non-educational setting, as the person who is exposed to EE has no intention of learning the language, but it happens regardless. Thus, it is also referred to as incidental learning.

Although the term EE is a relatively recent term within the field of second language acquisition (SLA), it is clear, that over the past years, there has been an increase in research

focusing on informal and extramural learning activities, such as for example playing digital games, reading books and watching TV series and films, as one can see it can involve a lot of activities. As long as one has access to the internet the opportunities for EE learning seem endless. Furthermore, it should be noted that EE activities are activities that are chosen by the learner's specific interest, with the purpose of enjoying the chosen activity. The contrast to EE is in-school learning, which is based on teacher-initiated activities. This refers to everything the pupils learn at school, as long as it is dictated by a teacher. The reason why Sundqvist and Sylvén (2016) are so specific about the term extramural English, is because they are eager to take away any connections to learning in an educational sense, as their main focus is on the exposure to English in non-educational situations (Sylvén & Sundqvist,2016, p.8). In addition to this, other scholars have used quite similar terms that relate to EE, but Sundqvist and Sylvén (2016) have considered these terms as inappropriate within the context of EE.

It should therefore be noted that it is important to have an understanding of theories on SLA with close relations to EE so that the reader understands how EE functions compared to quite similar SLA theories, as well as better understanding the data in the coming chapters of this thesis.

2.2.1 Terms related to extramural English

Although Sundqvist (2009) coined the term extramural English in her PhD in 2009, the term is still relatively recent within the field of SLA. However, there are some terms that are quite similar within the field of SLA. For instance, Benson (2011) uses the term *out-of-class learning.* Benson defines this as: "activities that have no direct relationship to schooling, and that much of such learning takes the form of self-directed naturalistic learning, in which the learner engages in language activities for the pleasure of interest, but also with the intention of learning" (Benson, 2011, p.139). It is here Sundqvist and Sylvén (2016) draw a distinction from Benson (2011), as his use of the word "learning" as a key concept for the term may cause some confusion. Sundqvist and Sylvén (2016) argue that it may be associated with Krashen (1982) and his concept of learning as a conscious process, instead of acquiring language subconsciously through exposure (Sundqvist & Sylvén, 2016, p.8). Moreover, by integrating the word "class" to the term, it may create an educational picture. It thus creates a mismatch between Benson's view and what Sundqvist and Sylvén' (2016) really mean by their term EE, as EE refers to English situations with no educational connections (Sundqvist & Sylvén, 2016, p.8).

A more relevant term to EE is *incidental learning*, which Laufer and Hulstijn (2001) define as "learning without an intent to learn, or as the learning of one thing, e.g., vocabulary, when the learner's primary objective is to do something else, e.g., to communicate" (Laufer & Hulstijn,2001, p.10). Sundqvist and Sylvén (2016) argue that it is reasonable to view incidental learning as a sub-category of EE because EE allows for both intentional and incidental learning to happen (Sundqvist & Sylvén, 2016, p.8). In sum, *incidental learning* is a term more closely related to EE as it refers to learning that happens incidentally.

2.3 Second Language Acquisition

The present section briefly describes the terminology referred to as second language acquisition (SLA). According to Ellis and Barkhuizen (2005), SLA is defined as: "the learning of another language (second, third, foreign) after the acquisition of one's mother tongue is complete" (Ellis & Barkhuizen, 2005, p.3). Sundqvist (2009) asserts that SLA may refer to the learning of any other language than the learner's first language (Sundqvist, 2009, p.10). In addition, Ellis and Barkhuizen (2005) suggest that SLA could refer to the study of how people learn a second language. Thus, since the term SLA could seem to have a dual meaning it could cause some confusion. As a consequence, and in line with Sundqvist (2009), the researcher will use the term SLA when referencing to the general field of second language learning.

In this thesis, the language of interest is English taught in the Norwegian context. Therefore, the language one aims to learn, in this case, English, will be referred to as the targeted language (TL). Furthermore, the researcher will be using the term L2 acquisition/ learning when referring to the process of learning a second language. The mother tongue will be referred to as L1, and the teachers of English will be referred to as English as a Foreign Language teachers (henceforth EFL teachers).

Lastly, it is necessary to address the terms "learning" and "acquisition". Some scholars argue that the terms are interchangeable, while others within the field of SLA would disagree (Sundqvist,2009). For instance, Krashen (1982) claims that there are two independent ways of developing one's L2, either through acquisition (a subconscious process) which is linked to exposure, or through learning (a conscious process) which is linked to formal instruction. This includes rehearsing, the learning of grammar and rules through a conscious process so that the learner can make use of the acquired language in the right way (Krashen,1982, p.10).

Moreover, the terms can also be referred to as implicit and explicit L2 learning (Krashen, 1982). These terms are important factors for understanding the theories used in the

development of EE. Ellis (1994) defines implicit learning as: “acquisition of knowledge about the underlying structure of a complex stimulus environment by a process which takes place naturally, simply and without conscious operations” (Ellis, 1994, p.2). In other words, learning that happens without the purpose of learning, it happens incidentally, without one even knowing. In contrast to incidental learning, explicit learning is defined as: “a more conscious operation where the individual makes and tests hypotheses in search for structure” (Ellis,1994, p.2). This means that the learner actively takes part in the learning process, searching for information or through formal instruction.

2.4 Theoretical perspectives on SLA

There are several aspects that have an effect on the different areas of L2 acquisition, for example, awareness of implicit and explicit L2 learning (Sundqvist,2009). In addition, individual learner differences such as motivation and self-confidence can affect L2 acquisition in a more positive way, compared to those who have low motivation and low self-esteem (Krashen,1982; Sundqvist,2009). Such factors are all important in the process of understanding the theories used in the development of EE. The following sections give a description of different theoretical perspectives on SLA which relate to EE.

2.4.1. Krashen’s monitor theory

Krashen’s (1982) monitor theory can be relevant to extramural English since it encompasses theories that are connected to EE. Krashen (1982) presents five different hypotheses for language acquisition within his Monitor theory for second language acquisition. They are the acquisition-learning hypothesis, the monitor hypothesis, the natural order hypothesis, the input hypothesis, and the affective filter hypothesis. The five hypotheses all focus on developing the four main skills: reading, writing, listening, and speaking (Krashen,1982). These four skills can be divided into two groups: written skills (reading and writing) and oral skills (speaking and listening). The different types of skills are considered equally important for language acquisition.

2.4.1.1 The acquisition-learning hypothesis

The first hypothesis is the acquisition-learning hypothesis, which has already been discussed above in Section 2.3, regarding the difference between acquisition and learning. According to Krashen (1982), acquisition is more influential than learning (Krashen, 1982, p.20).

Moreover, Krashen (1982) claims that most language is learned subconsciously, a process where the learner is not fully aware of the fact that he/she is developing a second language, as the learner is only using it for communication. This relates to EE learning, as this is referred to as learning which happens subconsciously. Children choose activities which they are interested in and learning can happen without them even knowing. For example, when learners play digital games in a multiplayer mode, the learners often communicate with other players without being fully aware of the fact, that they use the TL to communicate with other speakers of English.

2.4.1.2 The natural order hypothesis

The second is the natural order hypothesis. Krashen (2013) claims that learners acquire the parts of the TL in the same predictable order but at a different pace (Krashen, 2013, p.1). For example, it is common to acquire the grammatical structure of yes-no questions before one learns the structures of wh-questions (Krashen, 1982, p.15). Moreover, the order of acquisition will not change regardless of explicit instruction (Krashen, 2013, p. 2). This means that teaching cannot change the natural order of acquisition. However, some of the structures are acquired by the learners at a different tempo. This means that the order of acquisition is independent of the learner's age, L1 background, and conditions of exposure to the TL (Krashen,1982, 2013; Sundqvist & Sylvén, 2016, p.79). Understanding this, the learners will acquire the targeted language at their own pace, when they are ready.

2.4.1.3 The monitor hypothesis

The third is the monitor hypothesis, which suggests that the language one has acquired subconsciously is the language that helps the learner produce fluent output, whereas what one has learned consciously such as grammar rules only functions as an editor, or monitor (Krashen, 2013, p.2). For instance, when one is about to say something in a second language, it is, according to Krashen (2013), one's subconsciously acquired competence that is responsible for the sentences popping into one's mind. According to Krashen (1982), the rules of the language, when subconsciously acquired, only play a small part in the learners' L2 acquisition (Krashen, 1982, p.16). Moreover, to master the language rules on an adequate level, three criteria should be fulfilled (Krashen,1982). The first criterion that will help the learners to be effective in their L2 acquisition is that they need to be given enough time to think so that they understand how they should formulate themselves (Krashen,1982).

However, it should be noted that increased awareness of language rules can potentially cause damage to the learner's confidence. For some learners, awareness of rules may be helpful, but for others, it can increase stress, which can make the learner hesitate when speaking aloud and make it harder to understand each other (Krashen, 1982, p.16). The second criterion emphasizes the importance of form when the learner speaks aloud. Focusing on correctness is difficult, as it is hard to think about what you are saying and how you are saying it at the same time (Krashen, 2013). The final criterion concerns knowledge of the rules of the language, which is one of the most complex and challenging aspects of L2 acquisition. In addition, it is almost impossible to teach the learners every rule, as some are too complicated (Krashen,1982). Krashen (1982) concludes that the learner will only use grammar as a monitor when all of these three criteria are fulfilled, which for most people, only happens when they take a grammar test (Krashen,1982, 2013).

2.4.1.4 The input hypothesis

The fourth is the input hypotheses. This hypothesis describes how learners move from one stage of the acquisition process to another. According to Krashen (2013), one acquires language when one understands messages that contain language that one has not yet acquired, but one is ready to acquire (Krashen, 2013, p. 2). The input hypothesis proposes that one acquires L2 by exposure to comprehensible input that is just beyond the learner's current stage of linguistic competence. Krashen (1982) argues that learners will only comprehend new parts of language when the structures are a little more advanced than the ones they have already acquired (Krashen,1982, p.21). Comprehensible input has therefore been given the formula 'i+1. As long as there is comprehensible input beyond the learner's current level of linguistic competence the learner will make progress (Krashen,1982). This hypothesis is quite similar to Vygotsky's (1978) theory of ZPD, which will be addressed in Sub-section 2.4.3.

2.4.1.5 The affective filter hypothesis

The final is the affective filter hypothesis. This hypothesis concerns how affective filter of different aspects connects with L2 acquisition (Krashen, 1982). Krashen (2013) argues that affective variables do not impact L2 acquisition directly, but it prevents input from reaching the part of the brain responsible for L2 acquisition (Krashen, 2013, p.5). In other words, these could be variables that block the input from being acquired, even though one might understand the input. However, what is seen as affective factors for L2 acquisition will vary

from researcher to researcher. Krashen (1982), argues that the factors closely linked to L2 acquisition can be put into three categories: the importance of motivation, confidence, and low anxiety are factors that are prominent for successful L2 acquisition (Krashen, 1982, p. 31).

The acquisition-learning hypothesis, the input hypothesis, and the affective filter hypothesis are well connected with EE, as EE implies that learners acquire language incidentally, through the exposure of input to the TL, and it happens because they are motivated and have a positive attitude towards the input. They take part in something they enjoy, for example playing their favorite video game. This is a situation where they are motivated, the input from the game is comprehensible, but sometimes a little bit more advanced than their current linguistic level. However, the learners already acquired L2 proficiency, combined with the structures and storylines of the games, can help them understand. Through this process, the learners can potentially acquire language without even knowing.

2.4.2 The interactionist approach

Within the field of SLA, some scholars have disagreed with Krashen's (1982) theory. His model of SLA has been criticized, as scholars have claimed that his model lacks empirical validity (Sundqvist & Sylvén, 2016). However, there is no doubt that his contribution within the field of SLA has been significant, especially when it comes to the importance of input for L2 learning, along with other contributions such as his five hypotheses that have been discussed above.

According to Long (1981), cited in (Sundqvist & Sylvén, 2016), interaction is a key element for L2 acquisition, and he thus proposes the interactionist approach. This approach emphasizes the necessity of comprehensible input to the TL, and this happens, according to Long (1981), through modifications during an actual interaction (Long,1981; Sundqvist & Sylvén, 2016, p.80). In addition, Long (1987) claims that comprehensible input most often happens through the negotiation for, or of meaning, which according to Long, refers to the speakers' ability to make adjustments to their speech or other techniques as a way to avoid breakdown in communication (Long,1987; Sundqvist & Sylvén, 2016, p.80).

Later on, Gass and Selinker (2008) have argued that: "the interaction approach encompasses learning through input (exposure to language), production of language (output) and feedback that comes as a result of interaction (Gass & Selinker, 2008, p.317). In other words, what we learn from input to the TL input, how we produce language, and finally,

getting feedback on the language that has been produced. Together with Long (1981, 1987), Gass and Selinker (2008) also emphasize that negotiating for meaning is a central part of the interactionist approach. For instance, when the participants of the conversation talk naturally with each other it could indicate that both parties of the conversation understand what they are talking about. However, when the conversation is interrupted or breaks down, the participants of the conversation tend to start questioning utterances which they did not understand. By doing so, they negotiate what was not understood and this allows the participants to answer correctly and get back into the conversation (Gass & Selinker,2008).

Sundqvist & Sylvén (2016) argue that the interactionist approach is highly relevant for L2 learning (Sundqvist & Sylvén, 2016, p.81). Moreover, it can be connected to EE activities as well since students are exposed to TL input by taking part in EE activities such as watching movies, tv-series, listening to music, reading books, or playing digital games. Besides, in some of these activities, they will have to produce speech (output), for example when they are communicating with other players while playing online games (Sundqvist & Sylvén, 2016).

2.4.3 Vygotsky's socio-cultural theory

Vygotsky (1978) argues that: "Development in children never follows school learning the way a shadow follows the object that casts it" (Vygotsky,1978, p.91). In general, the socio-cultural theory has an aim of explaining the human mental development, and especially children's development as seen in this example. In other words, children learn at a different speed due to their different mental stage. Within an educational context, Vygotsky is well known for his concept called ZPD, the zone of proximal development, which is defined as:

"The *distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance or in collaboration with more capable peers"* (Vygotsky,1978, p.86).

In other words, ZPD is about what the children can do alone and with a little help from people who are better equipped than the learner. For instance, if a learner tries to solve a problem, and suddenly he/she breaks down in the problem-solving process a more capable peer could then help the learner back on track by giving hints or explanations of what to do next, in order to solve the problem. Such processes could also be referred to as scaffolding.

This is support given to learners according to their needs to meet or achieve their goals (Gamerslearn, 2018).

As one can see, this has some similarities to Krashen (1982) and his input hypothesis. To develop a new stage in L2 acquisition, the new structures need to be a little more advanced than the structures that the learner already has acquired. This theory is closely related to EE. Some EE activities function as scaffolding, especially digital games. Inherent within the design of almost all video games are scaffolds, which function as a guide to get through a given challenge or an objective. In the same way as education, video games attempt to tailor the experience to the needs of the player so that they are able to succeed with the given task (Gamerslearn,2018). This could also happen in multiplayer games, where the players communicate with each other, and by doing so, they help each other to solve a challenge. In cases such as these, you often play with a more capable peer, both when it comes to the knowledge of the game and their skills, but also with regards to the language. During an online session in a multiplayer mode, one will often communicate with other people who are more proficient in the TL. Gass and Selinker (2008) argue that negotiating meaning is a vital part of the conversation between two learners, as it will help them to correspond correctly to each other (Gass and Selinker,2008). In addition to this, Long (1987) claims that comprehensible input is something that is mainly achieved by negotiating for meaning (Long,1987; Sundqvist & Sylvén, 2016, p.80). In the case where "gamers" communicate with each other one will often have to negotiate the meaning of the conversation, as one will meet people who are more and less proficient in the TL. Either way, both will benefit from helping each other out, as it is necessary to respond to the challenge, as well as regaining the flow of the conversation. Importantly the players are communicating in an environment where they feel comfortable. This takes away a lot of anxiety and hesitation which many learners experience in a more educational setting, where they, for example, are afraid not to be able to speak correctly. This is important as confidence and low anxiety are important factors for successful L2 acquisition (Krashen, 1982).

2.4.4 Individual learner differences

Another aspect that might affect one's ability to develop a second language is individual learner differences. The researcher has in the previous sections of this chapter discussed central concepts within the field of SLA, as well as looking into central theories of SLA with close relations to EE. According to Sundqvist (2009), the success of the learners' L2

acquisition often depends on several individual factors, especially factors such as personality, aptitude, and motivation (Sundqvist,2009). Such factors are often referred to as *individual difference variables* (Sundqvist,2009). The following individual learner differences are discussed below: personality, language anxiety, language aptitude, motivation, gender, and learner beliefs.

2.4.4.1 Personality

According to Dörnyei (2005), personality has been viewed as less important in an educational perspective, compared to other factors such as aptitude and motivation in SLA (Dörnyei, 2005, p.10). However, personality certainly matters as it explains the psychology behind human behavior. In terms of personality, a common view is that extroverts are better equipped for language learning, compared to introverts. However, according to Sundqvist (2009), this is not always the case, as it only seems to be valid for some aspects of L2 acquisition (Sundqvist,2009). According to Lightbown and Spada (2006), the advantages of an extrovert personality for L2 acquisition mainly concern oral skills, but it does not necessarily affect the acquisition of literacy or academic style (Lightbown & Spada, p.62). Moreover, what supports this argument is that more extrovert learners are not afraid to speak or make mistakes, and this is an important factor in the promotion of oral skills. In addition, Lightbown and Spada (2006) state that since extroverts tend to have the ability to take risks and, therefore, it consequently makes it easier for them to progress in language learning (Lightbown & Spada, 2006, p.61).

Strong self-esteem is a typical trait among extroverts, which, according to Rubio (2007), is an important factor for acquiring communicative competence in the TL. Moreover, Rubio (2007) asserts that self-esteem is one of the central drives in human beings and can therefore affect one's life for the good or the bad. In other words, low self-esteem could potentially affect learning situations badly (Rubio, 2007, p. 7). This is not beneficial, as high confidence will affect the L2 acquisition more positively, compared to factors such as low motivation and low self-esteem (Krashen,1982; Sundqvist,2009). However, Lightbown and Spada (2006) claim that it is not personality alone that decides whether or not one succeeds in L2 learning, but the way it combines with other factors (Lightbown & Spada, 2006, p. 63).

2.4.4.2 Language anxiety

Besides the personality trait, another influential factor is language anxiety. Sundqvist (2009) refers to Gardner (1993), who defines language anxiety as: “the apprehension experienced when a situation requires the use of a second language with which the individual is not fully comfortable” (Gardner,1993; Sundqvist, 2009, p.18). In other words, these are situations in which the learners do not feel comfortable due to lack of self-confidence or due to physiological responses. Language anxiety will therefore affect interaction and other test situations, and also L2 acquisition (Sundqvist,2009).

Pappamihiel (2002) contributed with research on language anxiety. The study was conducted on 178 middle-school Mexican immigrants in the United States. The findings showed that different types of language anxiety seemed to affect the learners. For instance, these types of anxieties are dependent on factors such as the context of interaction, testing, fears of negative evaluation, and identity issues. These types of issues harmed the learners’ self-esteem (Pappamihiel,2002, p.347). Additionally, Pappamihiel (2002) reported that avoidance was the most used strategy to reduce anxiety. Teachers should therefore take these issues into account when planning their EFL classes so that they create a safe and relaxed environment for the learners. One should therefore try to reduce the factors which possibly could trigger language anxiety (Pappamihiel, 2002, p. 347).

2.4.4.3 Language aptitude

Language aptitude is related to the concept of human abilities, which covers a variety of cognitively based learner differences (Dörnyei,2005, p. 31). According to Dörnyei (2005), aptitude has been seen as a key factor within the domain of L2 learning. Additionally, Ehrman and Oxford (1995) reported that aptitude measures were the ID variables most strongly correlated with L2 proficiency (Ehrman & Oxford,1995; Dörnyei, 2005, p.31). Language aptitude can therefore be viewed as an influential predictor of a learner’s academic success. Within the field of SLA, ability is often referred to as “learning ability”, which means the individual’s ability to acquire new knowledge, including language acquisition. In other words, language ability means the same as language aptitude (Dörnyei,2005). Differences in language aptitude will create individual language variables in language learning. However, motivational factors may override the aptitude effect. For instance, in some language environments, social settings could demand learners to learn the L2. If your L1 is French, but you live in England and the L2 is, therefore, the national language, many people seem to master an L2, regardless of their aptitude differences (Dörnyei, 2005, p. 66). In other words,

for a Norwegian, it would be hard to fit into the English culture if one only spoke Norwegian. In order to adjust to the situation, one would have to learn the TL to fit in and make oneself understood. This is often a typical case within professional football. The players are usually from different countries and learning the language is a necessity to make oneself understood, both on and off the field.

2.4.4.4 Motivation

Motivation and a positive attitude play an important part in SLA (Sundqvist,2009). Even the most gifted individuals will struggle to achieve their goals if there is a lack of sufficient motivation (Dörnyei, 2005, p. 65). Gardner and Lambert (1972) distinguish between "integrative motivation" and "instrumental motivation" (Gardner & Lambert, 1972; Lightbown & Spada, 2006, p. 64).

On the one hand, integrative motivation is viewed as learning for personal growth, or, as Dörnyei (2005) asserts, an emotional identification. For instance, this identification could concern the L2 community and the identification with the speakers of the TL, a wish to integrate and adapt to the TL community through the use of language. Additionally, integrative motivation can be the motivation to learn an L2 so that it will help if one is considering moving to an English-speaking country to study, and therefore wishing to take part in the culture of those who are speaking the TL (Dörnyei,2005).

On the other hand, instrumental motivation is language learning for immediate or practical reasons. For instance, getting a job or completing a task (Gardner & Lamber, 1972; Lightbown & Spada, 2006, p. 64). Lightbown and Spada (2006) further report that research has shown indications that both types are linked to success in L2 acquisition (Lightbown & Spada, 2006, p. 64). However, Dörnyei (1990) suggests that instrumental motivation could be viewed as more important than integrative motivation in the EFL classroom. These learners are still in their early stages of language learning, and it is therefore they are unlikely to be ready to integrate into the target L2 community (Dörnyei,1990). Overall, motivation is a significant factor in achieving success in second language learning. However, there will always be other variables that could affect the language learners' achievements.

2.4.4.5 Gender

The next individual learner difference being addressed is gender. This is an element that has caught the attention of researchers in the recent years, and a general trend has been that girls

generally do better in school than boys (Sundqvist,2009). According to Sundqvist (2009), explanations of this have pointed at neural science research, which previously referred to differences in the brain when explaining the differences between the genders. This has been used to explain why boys tend to lag behind girls in school since the majority of females' brains develop quicker than males', it could therefore explain that girls mature earlier than boys (Dahlström, 2007; Sundqvist, 2009, p.20).

However, there have been different findings on the boys' lack of good results in English classes in Sweden. In Sweden, English has seemed to be the only school subject where the boys have been catching up with the girls (Sundqvist, 2009). Sundqvist (2009) suggests that this might be explained by the positive impact EE has on boys' L2 proficiency. Moreover, the boys tend to have a higher exposure to EE, compared to girls. In addition, the boys' types of EE activities are often different from the EE activities girls participate in (Sundqvist,2009; Sundqvist & Sylvén,2012, 2016).

2.4.4.6 Learner beliefs

According to Lightbown and Spada (2006), all learners and especially older learners have certain beliefs regarding how their learning instructions should be presented. Moreover, learner beliefs are defined by Lightbown and Spada (2006) as: "Beliefs which are based on previous learning experiences and the assumption that a particular type of learning (right or wrong) is the best one for them to learn" (Lightbown & Spada, 2006, p.91). In other words, learner beliefs refer to previous experiences that have been effective in the past, and thus, the learners have strong beliefs that some kind of learning works for them best. According to Dörnyei (2005), there is no doubt that previous research has shown some evidence that the beliefs language learners have will affect how they will master an L2 (Dörnyei, 2005, p.214). For instance, if one is learning something that is viewed as irrelevant for one's future, it will have a negative effect on the targeted subject that is being learned. As an example, if the learner is learning Chinese and his/her attitude towards this is that the learner will never travel to China, nor speak the language in the future, it will certainly affect the learner's motivation. Moreover, Dörnyei (2005) asserts that findings in educational psychology show that learners' beliefs about knowledge and knowing will affect learners' comprehension and cognitive flexibility when encountering complex information.

If learner beliefs can be viewed as an ID-variable for L2 acquisition is, according to Dörnyei (2005), hard to give a definite answer. However, Dörnyei (2005) argues that creating

realistic learner beliefs is important in order to enhance the learner's motivation. In sum, positive learner beliefs towards the TL that is being learned will enhance motivation, which could affect the learner's success in the development of a second language.

2.5 Vocabulary acquisition

It is evident that words are the building blocks for learning a new language since it is essential for listening, speaking, reading and writing. According to Nation and Webb (2017), words will affect almost every aspect of our lives (Nation & Webb, 2017, p. 1). Moreover, without the ability to produce the needed words to express oneself correctly, it will make it harder to be fully understood. Besides, if one does not know the words one encounters, it will complicate the process of understanding what one hears and reads (Nation & Webb, 2017).

Nation and Webb (2017) argue that the number of words that one knows supplies one with the necessary tools for learning other aspects of language, such as pragmatics, syntax, morphology, and phonology. Additionally, these aspects play an important role in both L1 and L2 learning. Lastly, the number of words that the students possess highly correlates with their grades (Nation & Webb,2017).

According to Hiebert and Kamil (2005), vocabulary is not a developmental skill or one that can ever be seen as something that we will fully master. Moreover, they argue that the expansion and elaboration of one's vocabulary is a process that is continuous throughout a whole lifetime (Hiebert & Kamil, 2005). At the beginning stages of the learning process, different words hold different values for learners, and these values are typically indicated by their frequency. For instance, it helps the learner to know words such as "food", "help", and "water" compared to words like "abduct", "foam" and "adorn". Clearly, the more frequent words will hold a higher value to the learner as they are more likely to be needed for communication (Nation & Webb, 2017). Thus, it is common to classify words into different types of discourse, according to their frequency, where the most common vocabulary categories are split into high-frequency words and low-frequency words (Nation & Webb, 2017). The categories provide an indication of which words that are important to learn. High-frequency words are words learners are exposed to in all forms of speech and writing. Therefore, not knowing such types of words will make it hard to understand and communicate (Nation & Webb, 2017). High-frequency words are typical words that learners are exposed to while participating in EE activities.

In the following sub-sections, the researcher will focus on vocabulary acquisition, mainly vocabulary learning which occurs incidentally, as this relates to EE. This is important as this is one of the main aspects this thesis attempts to shed light on.

2.5.1 Incidental vocabulary learning

In general, it is common to think of vocabulary learning as a conscious process. However, the majority of researchers emphasize that most L1 words are learned incidentally (Nation & Webb,2017). Nation and Webb (2017) refer to Ellis (1999) for a definition of incidental vocabulary learning. Ellis (1999) defines incidental vocabulary learning as: "learning words as a byproduct of a task" (Ellis,1999; Nation & Webb,2017). For instance, this could be achieved by reading a book where the focus is to understand the content rather than words, but gradually the learner can learn new words as the learner encounters the same words over and over again (Ellis, 1999, p. 36).

Incidental learning could also happen while watching films, Tv series, or videos, where the aim is to understand the content. In such an example one will often encounter the same words over again within a specific context. The main focus is to understand the input and not necessarily learn words (Nation & Webb,2017). In other words, vocabulary learning is, therefore, in general, seen as an incidental process rather than intentional. In addition, Nation and Webb (2017) argue that a large exposure to input will benefit incidental vocabulary learning to a larger degree, as this will give the learner the opportunity to encounter words repeatedly and more often. This will enhance the possibility of expanding one's vocabulary size.

Although vocabulary learning is seen as an incidental process especially within L1 learning, previous research on L2 learning has shown that this process does not necessarily have the same effect on L2 learning (Nation & Webb,2017). Conscious vocabulary learning tends to show larger gains within the context of L2 learning, in contrast to incidental vocabulary learning. However, Nation and Webb (2017) claim that this contrast becomes less clear when one considers the potential benefits that could be gained through incidental vocabulary learning over a longer period of time.

2.5.2 Vocabulary acquisition through reading

Nation and Webb (2017) refer to Nagy et.al. (1985) when describing incidental learning through reading. Nagy et.al. (1985) argue that free reading is the most significant factor in

vocabulary acquisition during the school years within the L1 context. Moreover, they present three key factors in vocabulary growth as a result of reading. Firstly, according to their studies, the volume of input is significant as this increases the opportunity for encountering words over and over again (Nation & Webb,2017). The second key factor is that the quality of the reading material matters, as not all texts are equally good. In addition, some sentences will function positively when providing useful information that potentially could facilitate learning, while other sentences could give inadequate information, or mislead learners about the meaning of an unfamiliar word (Nation & Webb,2017). Finally, the third factor is time. The repeated encounter with words is crucial because if words are not re-encountered over a longer period of time, the acquired knowledge could potentially slip.

Regarding L2 learners, research has shown that they too are able to learn words incidentally through a high volume of repeated encounters of words within a specific context (Nation & Webb,2017). Contrary to L1 acquisition, most studies have shown that the gains in L2 acquisition through incidental learning tend to be less significant with fewer words being learned, compared to L1 learners. However, this is because L2 learners, particularly in the EFL context, are exposed to only a small amount of L2 input. As discussed above, the volume of input is crucial for incidental vocabulary learning to occur (Nation & Webb,2017). As a result of this, within the EFL context, programs have been made to enhance the amount of L2 input, for example through extensive reading. The problem is that most L2 programs are not able to provide enough time to read the acquired amount of text that is needed for vocabulary growth to occur (Nation & Webb,2017). Nevertheless, reading as an EE activity could potentially enhance the amount of input, which could result in incidental vocabulary growth, if given enough time.

2.5.3 Vocabulary acquisition through spoken input

Within the context of L1 learning, researchers have argued that lexical growth in the pre-literate stage is solely achieved through large amounts of spoken input. However, it is written input that is seen as the main source of later gains (Nation & Webb,2017). According to Nation and Webb (2017), this would suggest that the learners learn very effectively through spoken input before they can read, and not so effectively once they can read. This is explained by the fact that incidental learning through spoken input provides fewer encounters with low-frequency words, compared to the written input (Nation & Webb,2017). It means that if the learners have already acquired the most common high-frequent words that are used in speech,

their vocabulary is unlikely to expand any further, due to fewer encounters with new low-frequency words.

However, in the context of L2 learning incidental vocabulary learning through spoken input could be beneficial. According to Webb (2015), the greatest contribution television has given language learning is its huge potential of providing large amounts of spoken input. Large amounts of spoken input may lead to gains in vocabulary learning, listening comprehension and, other aspects of L2 learning (Webb, 2015, p. 1). For instance, Nation and Webb (2017) argue that if EE activities such as watching films and television are practiced regularly over time, the number of unknown words that the learners encounter will increase continuously, and this will enhance the learning potential, as these words are encountered repeatedly. Additionally, previous research has consistently shown that incidental learning has been effective both for L1 and L2 learners through watching television and films, due to a large amount of input and repeated encounters with low-frequency words. Furthermore, Nation and Webb (2017) argue that incidental vocabulary learning through spoken input can be similar in gains as incidental vocabulary learning through reading. Yet, written input has often been viewed by researchers as the main source for vocabulary growth (Nation & Webb,2017).

It is a common assumption that people are more exposed to spoken input, compared to how much they read. In Norway, Medietilsynet (2016) conducted a research study based on children's experiences with various media in the Norwegian context. The age of the children in the study varied from 9 to16 years, and the findings showed that it was not unusual for the participants to spend two or more hours on watching TV and films on daily basis. Furthermore, Medietilsynet (2020) conducted a similar study in 2020. The study was conducted on children from the age of 9 to18 years. The findings showed that 62% of Norwegian children at the age of 9 to18 mainly used English when watching TV series, films, and videos online. In other words, the exposure to spoken input seems to be larger in comparison to the input one gets through reading. Although a written text may provide more encounters with low frequency words compared to TV series and films, Nation and Webb (2017) argue that if the amount of exposure to spoken input is high enough, it could potentially lead to more or less the same number of encounters with low-frequency words as reading can give.

2.6 Research on extramural English

Previous research conducted on EE has acknowledged the effect EE may have on L2 acquisition. EE activities are activities which the learners have chosen based on their own interests, in a non-educational setting, which can, in turn, play an important role in the learners' motivation. As mentioned in Section 2.3.4, motivation is a major key for any learning to take place and it is closely related to EE. Moreover, research has shown that EE activities can correlate well with L2 vocabulary proficiency and L2 proficiency in general. Sundqvist (2009) studied Swedish ninth graders' EE habits and oral and vocabulary proficiency. The aim of the study was to examine whether or not EE had an impact on Swedish ninth graders' oral proficiency and vocabulary learning. In addition, it attempted to explore the students' EE. The study was designed as a mixed methods research study, and the data was collected from school classes at three different schools in Sweden. In total, 80 students participated in Sundqvist's (2009) study. The data was obtained through questionnaires, language diaries, recorded speech from speaking tests, raters' assessment of learners' speech, written vocabulary tests, the Swedish national test of English for Grade 9, and student interviews. As a way of measuring the students' total exposure to EE, Sundqvist (2009) used a questionnaire and a language diary each covering a regular week.

The findings from the language diaries revealed that participants spent a total mean of 18.4 hours per week on EE activities, with individual variations of (SD=12.9) (Sundqvist, 2009). Moreover, Sundqvist (2009) reported that boys spent on average more time than girls on EE activities. The most popular EE activity in Sundqvist's (2009) study was listening to music, followed by playing digital games, watching TV series, films and movies, surfing the internet, other activities, reading books, and at last reading newspapers/ magazines. When it comes to gender differences, it was discovered that the boys spent more time on playing digital games and using the internet compared to the girls (Sundqvist, 2009).

In terms of the correlation between EE exposure and L2 proficiency, the findings demonstrated a positive relationship between EE and vocabulary size. The participants with the lowest exposure to EE had the lowest mean scores on the vocabulary test, while the pupils with higher exposure to EE performed better. Moreover, the findings suggested that boys were more sensitive to EE in comparison to girls, as they statistically performed better than the girls on the vocabulary test. However, Sundqvist (2009) argues that this could be due to the fact that boys are engaged in different EE activities, which indicates that the types of EE matter. Additionally, Sundqvist (2009) argues: "Extramural English activities that require that the learners are active or productive are more important than those that allow the learners to remain passive" (Sundqvist,2009, p.203). In other words, the amount of exposure to the right

type of EE activities may be an important factor in L2 acquisition. Productive activities could be activities such as reading, playing digital games, and using the internet. In contrast, more passive activities would be EE activities such as watching movies, TV, videos, and listening to music. Nevertheless, passive activities also correlate with vocabulary acquisition, but the impact is seen as less significant compared to the more productive EE activities (Sundqvist,2009).

Another factor Sundqvist (2009) put under the loop was motivation in relation to EE, namely learners' self-efficacy. Sundqvist (2009) defines self-efficacy as peoples' judgement of their own ability to carry out specific tasks (Sundqvist, 2009, p.200). In other words, an example of this could be learners' beliefs towards how well one's oral skills are. Based on Sundqvist's (2009) findings, she concluded that the higher one's involvement in EE was, the higher self-efficacy one had. Self-efficacy may therefore determine one's involvement in EE.

One of the concluding points in her dissertation was that EE is seen as an independent variable, which pinpoints EE as a possible path to progress in English for all learners, regardless of any personal variables such as socioeconomic background (Sundqvist, 2009). In general, the study demonstrated that the amount of exposure and the types of EE seemed to be important variables for oral proficiency and vocabulary acquisition.

In the Norwegian context, Jakobsson (2018) wrote a master's thesis on extramural English. It was a mixed methods approach, where the data was obtained through a digital questionnaire and a set of focus-group interviews. Jakobsson (2018) studied Norwegian 10th graders' EE habits and how EE activities and the students' attitudes towards the subject correlated with their grades.

A total number of 105 students participated in the study, and his findings indicated that Norwegian 10th graders spent on average 14 hours per week on extramural activities. Interestingly, Jakobsson (2018) reported that 65% of the participants in the study believed they learned most or all of their English outside of school. In addition, Jakobsson (2018) reported that the students, in general, claimed that they learned most English through EE rather than in school.

Regarding the kinds of EE activities Norwegian 10th graders were engaged in, the findings revealed that gaming was the extramural activity with the highest frequency of the EE activities, followed by activities such as watching movies, TV series, and listening to music. For instance, 52% reported that they spent between 11-60 hours listening to music each week. On the other hand, reading was the least frequent EE activity, and 35% of the participants reported that they read no books in their spare time.

Lastly, Jakobsson (2018) found a connection between the students' attitudes towards the English subject and their grades. Jakobsson (2018) concluded that a person's motivation and perceived self might affect his/her grades in one way or another and that it also seemed to be a strong correlation between high EE exposure and its effect on the students' grades.

In addition to Jakobsson (2018), Dahl (2019) and Reda (2019) have contributed with research on EE in the Norwegian context. Similarly, to Jakobsson (2018), their research studies were conducted on older learners. Dahl (2019) conducted his study on ninth graders attending lower secondary school, while Reda (2019) conducted the study on students attending upper secondary school (VG1).

In Dahl's (2019) master's thesis a mixed methods approach was used to gather the data. The data was obtained through student questionnaires and teacher interviews. The participants in the study were 96 ninth graders and four EFL teachers. Dahl (2019) reported that the majority of the students believed their oral skills were developed mainly through their exposure to EE, in contrast to activities inside the classroom, even though classroom activities were also seen as important for their oral development.

Dahl (2019) studied the students' beliefs about EE learning, and the findings indicated that the students believed that EE activities had a significant impact on their oral development. Moreover, an interesting finding was that the students viewed these activities to be more personal, which, as they argued, helped increase their motivation.

Moreover, the study looked into the types of EE activities that the students were engaged in. The study reported that the most popular EE activity among these ninth graders was watching TV series, movies, and videos. This was an activity that the students viewed as both motivational and influential for their oral skills. In addition, activities such as speaking to other people in English, online gaming, and listening to music and audiobooks were also popular activities among the students. Dahl (2019) concluded that these types of activities were likely to provide an arena for developing ones' oral skills unintentionally and naturally.

Reda's (2019) master's thesis was another contribution to the field of EE learning in the Norwegian context. The study was a mapping study of multilingual students from minority backgrounds and their EE habits. Reda (2019) used a qualitative research design, including 5 participants attending upper secondary school. One of the aims of the study was to find out whether or not the students used extramural English as a way to enhance their competence in the English subject.

The main findings of the study showed a common agreement regarding the benefits of extramural English. However, the students had different reasons and motivations for their

engagement in EE activities. For instance, instrumental motivation seemed to have an impact on the participants in the study, as some of the participants stated that they were engaged in extramural activities mainly to enhance their grades in the English subject. Furthermore, some argued that they saw EE activities as a way to enhance their competence in the English language, as they viewed English as an important international language rather than a school subject.

2.6.1 Playing digital games as an EE activity

Sundqvist and Sylvén (2012) presented empirical evidence that L2 English proficiency correlated with a high amount of time spent on the particular EE activity, namely playing digital games. This study was conducted on 86 English learners in Sweden, at the age of 11-12, which means that the learners attended primary school. The data was obtained through a questionnaire, a language diary, and three proficiency tests.

The purpose of the language diaries was to measure the amount of time the pupils spent on seven different EE activities on a daily basis. The seven EE activities listed in their language diary were as follows: reading books, newspapers/magazines, watching TV, films, using the internet, playing digital games, and listening to music (Sylvén & Sundqvist, 2012). Moreover, the students had the opportunity to write down any other English-related activities they had been involved in during the week the language diaries were to be filled in. The findings showed that the pupils on average spent 9.4 hours on EE activities per week. Furthermore, the individual range was large, and the values varied from nothing to 41.8 hours per week. Significantly, the EE activity which the pupils spent the most time on was playing digital games. The pupils reported an average of 2.6 hours per week as regards gaming. In general, the boys spent more time on EE activities than the girls, namely 10.6 hours per week as opposed to 8.4 hours per week respectively. The observations showed significant differences regarding the amount of time spent on digital games, and the various types of games. The boys on average spent 4.4 hours per week on gaming and they preferred playing online multiplayer role-playing games, while the girls only spent 1.1 hours per week, preferably playing offline single-player simulation games.

As a way to investigate whether or not there was a correlation between playing digital games and L2 proficiency, Sundqvist and Sylvén (2012) divided the pupils into three groups based on the amount of time they spent on digital games. The groups were: the *non-gamers* the *moderate gamers* and the *frequent gamers*. The group of *non-gamers* consisted mostly of

girls, while the majority of the *frequent gamers* were boys. The group of *frequent gamers* had an average playtime of 9.7 hours per week. Interestingly, this group stated in the questionnaires that they believed they had learned most of their English outside of school. The results from the vocabulary test revealed that the scores improved for each digital game group. This means that the *non-gamers* had the lowest scores, the *moderate gamers* scored higher than the *non-gamers*, while the *frequent gamers* had the highest scores in general. Additionally, gender trends for the vocabulary tests showed that the boys outperformed the girls in every part of the test. Not only did the *frequent gamers* have the highest score on the vocabulary test, but Sundqvist and Sylvén (2012) also found similar results for this group on the Swedish national tests.

Overall, based on their findings, one can see a noteworthy pattern that indicates that the frequent gamers scored higher on the vocabulary test, in comparison to the other groups who spent less time on this EE activity. Although some variables were not investigated, Sundqvist and Sylvén (2012) argue that this particular study shows a positive relationship between playing digital games and incidental and informal L2 English learning (Sylvén & Sundqvist, 2012). Their findings also corroborate the findings in Sundqvist (2009), which was conducted on Swedish 9th graders.

Regarding gender and the pattern that the boys outperformed girls in L2 vocabulary, it was emphasized that this was not a gender per se pattern. According to Sundqvist and Sylvén (2012), this could be explained by the type of games the boys played in comparison to the girls, and if the girls had used the same amount of time on the same type of games, they would most likely benefit equally well in terms of L2 proficiency.

In addition to Sundqvist and Sylvén (2012), Wickström and Sundqvist (2015) conducted a study on Swedish L2 learners, more specifically 80 teenagers. The aim of the study was to examine the relationship between gaming as an EE activity and vocabulary measures and students' grades. The main findings in the study discovered that gaming correlated well with vocabulary and grades, especially for boys. However, this difference was explained by the fact that there were fewer girls who played digital games compared to the boys in the study. Nevertheless, the findings showed a positive relationship between frequent game time and L2 proficiency.

Some research has also been conducted on the effects of playing digital games in a more educational context. For instance, Ranalli (2008) conducted a classroom-based study that investigated the pedagogical benefits the digital game *The Sims* could possibly have for EFL learners. Nine intermediate English learners at a university in the United States participated

in the study. Ranalli's (2008) findings showed that digital gaming can be beneficial for L2 vocabulary acquisition, especially if it is complemented with material that can make the input in the game more comprehensible, for instance, a vocabulary list.

Another study on digital games was conducted by Vahdat and Behbahani (2013). They studied the effect of digital games on Iranian EFL learners' vocabulary learning. The study was conducted on 40 intermediate EFL learners. The participants in the study were divided into two groups, each group consisting of 10 females and 10 males. The groups were one control group and one experimental group. The control group learned vocabulary through traditional classroom instruction, while the experimental group learned vocabulary through a digital game. The main findings of the study revealed that learning vocabulary through digital games could be more effective than instructional learning in the classroom and that playing digital games had a significant effect on vocabulary acquisition. Vahdat and Behbahani (2013) supported their argument by the fact that the natural repetition in games continuously exposed the language learner to the TL, which created more possibilities for acquisition to occur. Lastly, the study also showed that there seemed to be a correlation between gender and learning vocabulary via online games. It showed that males seemed to be more suited for video-game learning compared to females (Vahdat & Behbahani, 2013).

Finally, Medietilsynet (2020) conducted a study mapping Norwegian children's experiences with various digital media. The children's age varied from 9 to 18, and the findings reported that 86% of the participants played digital games. The study showed that 63% of the participants claimed that they mainly used English when playing digital games, and 60% of the gamers claimed they learned a lot of English when being engaged in digital games (Medietilsynet,2020). Needless to say, playing digital games seems to be a popular activity among language learners, and research has shown that it may be fruitful for L2 vocabulary acquisition.

3 Methodology

3.1 Introduction

In this chapter, the methods and research tools used for gathering the data are presented. Section 3.2 gives a presentation of the research context and the research design. It also explains how the data was collected and why it was collected in this particular way. Sub-section 3.2.1 gives a brief explanation of how and why the participants were selected for this study. In Section 3.3, the mixed methods approach is explained and justified. Section 3.4 presents the research tools and how they were piloted. The section is divided into the following sub-sections: Sub-section 3.4.1 explains the piloting process, while Sub-section 3.4.2 focuses on the language diary, Sub-section 3.4.3 explains the questionnaire, Sub-section 3.4.4 concerns the vocabulary test, and Sub-section 3.4.5 explains how the data was analysed. In Section 3.5 both validity and reliability are reflected. Finally, Section 3.6 elaborates on the ethical considerations that were taken into account when conducting this research study.

3.2 Research context

The present study focused on Norwegian primary pupils, namely 45 sixth graders, and their EE habits and attitudes towards the English subject, as well as their English vocabulary proficiency. Specifically, the main aim of this study was to examine whether there was a potential relationship between the amount of exposure to EE and the pupils' English vocabulary proficiency. To gather the necessary data, a mixed methods approach was used, collecting both quantitative and qualitative data (Dörnyei, 2007). The data was obtained through an electronic questionnaire made on SurveyXact. The questionnaire was designed as a mixed questionnaire (Christensen & Johnson,2019). This means that it was designed to collect both qualitative and quantitative data, which indicates that the questionnaire included both open-ended questions and closed-ended questions (Christensen & Johnson, 2019). Moreover, a language diary and a vocabulary test were used to gather quantitative data.

The pupil questionnaire, the language diary, and the vocabulary test were carried out in two sixth-grade classes at an urban primary school in Norway. The school was situated on the southwestern coast of Norway. Before the study, the EFL teachers of the two classes gave the researcher valuable pre-knowledge on the level of the classes. In general, the English proficiency was high among the pupils, and previous results on the Norwegian *National Test*

in English showed that on average the pupils scored above average. In total, a number of 45 pupils took part in this study, and the age of the pupils was between 11to12.

3.2.1 Sampling

Preferably, the researcher would have carried out the research study at various schools in the area in order to get a more representative picture of EE and its effects on younger learners. However, due to the coronavirus and the constantly changing regulations in the Norwegian society, this would have been hard to implement effectively. In addition, it would have been difficult to gain access to other schools due to the changing regulations in the society. Finally, the last consideration the researcher made was related to time. During the current situation, time is an uncertain variable. Conducting the project at many schools would have been both time-consuming and difficult, as one may not be granted access to the different schools. Therefore, for practical reasons, the researcher found it more convenient to conduct the study at one specific school, which was the school where the researcher was currently working.

This sampling can therefore be viewed as a convenient sampling, which, according to Dörnyei (2007), refers to the available participants who are willing to take part in the study. Moreover, Etikan et.al. (2016) state that: "a convenience sampling is a non-random sampling where members of the target population meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study" (Etikan et.al. 2016, p.2). Based on this statement, every criterion was fulfilled for the sampling of this research study. The pupils were motivated to participate in the study, and they were always available at agreed times. Moreover, the pupils had participated in other research studies quite recently and this was something they really enjoyed and took seriously. The final criterion that was fulfilled was that the participants were within a geographical area close to the researcher, which made it even more convenient to conduct the study at the chosen school (Dörnyei,2007; Etikan et.al., 2016).

3.3 Mixed methods design

In this study, a mixed methods approach was used to gather the necessary data. According to Dörnyei (2007), a mixed methods research study is namely a combination of quantitative and qualitative data. Additionally, Dörnyei (2007) argues: "A mixed methods study involves the collection or analysis of both quantitative and qualitative data in a single study with some

attempts to integrate two approaches at one or more stages of the research process" (Dörnyei, 2007, p.163). Furthermore, combining several research strategies can help broaden the scope of the investigation and help the researcher when concluding (Dörnyei, 2007). To produce a mixed methods study one can, add a qualitative component to any of the quantitative research methods or methodologies or add a quantitative component to any of the qualitative research methods or methodologies (Christensen & Johnson, 2019). In other words, this particular research study is a combination of both qualitative and quantitative data. The data collection was gathered through three different methods, two quantitative and one intramethod collecting both qualitative and quantitative data, which makes this particular research study a mixed methods approach.

Christensen and Johnson (2019) define qualitative research as data that tends to follow an exploratory mode, as well as research that gives a more in-depth description, for instance, interviews capturing direct quotations of people's personal perspectives and experiences to get a better understanding of people or a particular group. On the contrary, quantitative research is typically done under more controlled conditions, focusing on collecting and analysing numerical data to find patterns, averages, and more (Christensen & Johnson, 2019).

One of many good arguments for choosing a mixed methods study is, as Christensen and Johnson (2019) claim, that the combination of quantitative and qualitative research complements each other. Moreover, the idea of complementary strengths means that the whole in a mixed methods research study is greater than the sum of the parts. The mixed methods approach will help improve the research because the different research approaches provide different types of knowledge, along with different strengths and weaknesses. In addition, Christensen and Johnson (2019) state: "when combining two or more research methods with different strengths and weaknesses in a research study, it could potentially make it less likely to miss out on something important or making a mistake "(Christensen & Johnson, 2019, p.50). These statements indicate that using a mixed methods approach, including one or more quantitative components and at least one qualitative component could be the best possible solution to make the research complete, and potentially contribute to new knowledge. In other words, different methods of data collection can function as a complementation to each other, as it, according to Denscombe (2008), produces a more complete picture when combining information from several sources.

Additionally, Sandelowski (2003), asserts that researchers combine different methods to get a broader understanding of the aspects that are studied, comparing the findings with each other. Sandelowski (2003) further claims that it is easier to understand a complex topic when

it is analysed from several angles. By comparing findings against each other, research can occur as more valid and reliable if the researcher can get the same result or conclusion through different data collections or samples of participants (Sandelowski, 2003). This type of data verification is by Sandelowski (2003) referred to as triangulation, and it has been seen as an effective way of avoiding biases within research studies. In this particular mixed methods study, the data was gathered through a pupil questionnaire, a language diary, and a vocabulary test.

Commonly, researchers use questionnaires as a part of their data collection. According to Dörnyei (2007), using a questionnaire has several positive effects, for example, it is timesaving, and it makes it possible to gather a lot of data during a short period of time. However, using a questionnaire could also involve a few negative effects. For instance, a lot of participants do not spend a lot of time when answering the questions, and this could lead to few in-depth answers (Dörnyei, 2007). Thus, the design of the questionnaire is crucial. If the questionnaire includes many open-ended questions, the researcher could potentially be left with only a few elaborated answers (Dörnyei,2007). It is therefore wise to know one's participants so that one designs a questionnaire without too many time-consuming open-ended questions. It is therefore a cardinal rule to pilot one's questionnaire to determine whether it works or not (Christensen & Johnson, 2019).

As a part of collecting both qualitative and quantitative data, a questionnaire was used, which, according to Christensen and Johnson (2019), is called an intramethod mixing. This means that both quantitative and qualitative data are obtained through the use of a single method of data collection. In this case, a *mixed questionnaire* (Christensen & Johnson, 2019). Quantitative data in the questionnaire was gathered through closed-ended questions, in order to measure exposure to EE, as well as the types of EE activities. The quantitative data serves the purpose of collecting numerical data so that the researcher can analyse patterns and averages. On the contrary, the qualitative data collection was gathered through open-ended questions in the questionnaire. The open-ended questions gave a more in-depth description of the pupils' attitudes towards the English subject. Providing the researcher with direct quotations of their attitudes and beliefs. In sum, the questionnaire can therefore be viewed as a mixed questionnaire, since it provides the researcher with quantitative and qualitative data.

Quantitative data was also collected through the language diary and the vocabulary test, along with the quantitative part from the pupil questionnaire. The purpose of the language diary was to measure the amount of time the pupils spent on EE. In addition, it would enable the researcher to analyse the pupils' most frequent EE activities.

In the same way as the language diary, the vocabulary test was designed to collect numerical data to see how well the pupils performed on the test. The results from the vocabulary test will be compared with the findings from the language diaries and the pupil questionnaires.

3.4 The Study

3.4.1 Piloting

Before the pupil questionnaires and the vocabulary tests were conducted, the research tools were piloted. Ten pupils in the 7th grade were asked to complete the questionnaire and the vocabulary test. The pilot test of the questionnaire aimed to check whether or not the respondents could make sense of the questionnaire items, as well as ensuring that filling out the questionnaire did not take too much time.

The main goal of the vocabulary test was to make sure that the tasks were easy to understand and not too difficult, as well as ensuring that the test did not take longer than approximately 20 minutes to finish.

According to Christensen and Johnson (2019), it is a cardinal rule to test the research tools, so that one can determine whether or not it operates properly before a research study is conducted. This process is referred to as piloting, which means that one needs several individuals, similar to those participating in the study, to test the research tools before using them on those who are participating in the research study (Christensen & Johnson, 2019). Furthermore, it is recommended that you conduct your pilot test with a minimum of 5-10 people. In addition, it is recommended to ask friends or colleagues to check the research tools and make them note if there are any points of confusion before one conducts the pilot test to a larger selection (Christensen & Johnson, 2019).

The main concerns regarding the research tools were related to time, the length of the questionnaire, and the difficulty of the vocabulary test. According to Christensen and Johnson (2019), the researcher should check how long it takes the participants to complete the questionnaire under the same circumstances as those of the actual study. By doing so, it will give an indication whether or not the questionnaire is too long. Ten 7th graders participated in the pilot study to explore how much time was needed to complete the questionnaire and the vocabulary test, and regarding the difficulty of the vocabulary test. By piloting the questionnaire and the vocabulary test some adjustments were made.

As a result of the pilot test of the pupil questionnaire, some questions were removed in order to make the questionnaire shorter, as some of the 7th graders commented that the questionnaire was a little long. This was necessary feedback, as Christensen and Johnson (2019) argue that one must avoid writing overlong questions (Christensen & Johnson,2019). Moreover, a couple of the questions were rephrased because some of them were too long, and that made some of the 7th graders ask questions about what the question really meant. It was also essential to avoid making the language too advanced, as it is important that the participants fully comprehend the questions. Too advanced language would have affected the research negatively, due to unprecise answers, which could affect the reliability of the study. Developing short and understandable questions helps to ensure the validity and reliability of the study. Furthermore, based on the pilot test it was necessary to include a couple of options to the questions that were shorter and more concise. These were important factors that were taken into account to ensure the concentration and motivation of the participants in the research study.

In terms of the vocabulary test, the researcher discovered only minor issues regarding the construction of the test. Positively, the 7th graders participating in the pilot study showed that they had very few issues in terms of understanding the test. They all understood what to do, even though some of them completed the test with better results than others. However, the researcher observed that the test took a little longer than expected and a decline in concentration was observed on a couple of the test takers. The vocabulary test was planned to take approximately twenty minutes to complete, and a couple of the test takers needed several minutes more.

As a consequence of the pilot test, the researcher found it necessary to shorten the vocabulary test, to avoid declining concentration, which could lead to the pupils rushing through the test, instead of using their time and thinking properly through their answers. In sum, the pilot study was done to avoid getting unreliable results from the pupils who were going to participate in the study, thus making the research as valid as possible.

3.4.2 Language Diary

The aim of the language diary (see Appendix 3) was to measure the amount of time the participants spent on EE activities, as well as exploring the kinds of the most frequent EE activities. Before the language diaries were carried out, some general information was given in oral form by the researcher. Both the oral information and the language diary were

provided in Norwegian to make it as understandable as possible for the pupils. It is important to bear in mind that the participants in the research study are young children, and to get the accurate answers as possible it is necessary to ensure that they fully understand what they are answering. The pupils were given clear instructions on how they were supposed to fill out the diary. In short, the pupils were instructed to fill out the diary daily and note how much time they spent on each of the activities listed in the diary. Moreover, they were asked to note if they had spent time on any other EE activities which were not listed in the diary.

The language diary in this particular study was inspired by Sundqvist's (2009) PhD study and by Sundqvist and Sylvén's (2012) collaborative study, both conducted in Sweden. As for the design of the language diary, it was similar to the one Sundqvist (2009) and Sundqvist and Sylvén (2012) used in their studies. However, some minor adjustments were made regarding the types of activities that were listed in the diary. Several years have gone by since Sundqvist and Sylvén (2009,2012) developed their language diary. The researcher, who is currently working as a teacher at a primary school, knows that the types of EE activities children engage in have changed over the past years. Most of the activities on the list still occur, but some new activities such as watching videos on YouTube, using the social media app TikTok, singing in English, or watching live streams of people playing digital games through Twitch were added to the list. These types of EE activities have become very popular among younger children today, and they tend to spend a lot of time on such activities. Thus, the researcher found it necessary to add these activities to the language diary. Some examples of EE activities that were listed on the language diary were listening to music, using the internet, playing digital games, reading books, and watching films, TV series, and videos.

Moreover, another difference concerned the decision to expand the diary from one week to two weeks. The purpose was to compare the two weeks so that one could see if there were any differences in the amount of time spent on the different activities from the first week to the second week. In addition, one could see if the activities changed from week to week.

According to Sundqvist and Sylvén (2012), one should bear in mind that this particular method relies on self-report and this could potentially have flaws regarding reliability. For instance, it is difficult for younger children to remember the exact time they have spent on the different activities. It is also reasonable to believe that some of the pupils may forget to fill in the diary from day to day. Consequently, it would be wise to assume that some estimates will be made. To keep this to a minimum the researcher suggested that the teachers integrated the language diary as a part of the pupils' homework and reminded the pupils to fill out the diary each day.

3.4.3 Pupil questionnaire

Before the questionnaires were answered the pupils were given an oral introduction by the researcher. Moreover, the researcher gave the participants a clarifying instruction on how they should answer the questionnaire, which was adapted into Norwegian. The open-ended questions providing qualitative data needed longer answers from the pupils and were therefore highlighted and discussed orally before the completion of the questionnaire. This was necessary in order to make sure that the pupils understood the questions so that they answered the questions correctly. Importantly, it was emphasized that the researcher would be present during the completion of the questionnaire so that the pupils could ask questions if needed.

The questionnaire introduction (see Appendix 4) consisted of the questionnaire title and some general information about the project. Moreover, the questionnaire was written in Norwegian to make sure that everyone understood the questions. The pupil questionnaire was answered online, through SurveyXact, and consisted of 26 questions, all relevant to the pupils' beliefs about and attitudes to English as a school subject and their EE habits. Furthermore, the questions were made short and concise in order to be understandable and help the pupils concentrate throughout the completion of the questionnaire.
Pupils who needed help to understand the questions were given help so that they could answer the questions properly in order to avoid collecting unreliable data.

As mentioned in Section 3.3, the questionnaire was designed as a mixed questionnaire, which means that the questionnaire included open-ended questions providing qualitative data and closed-ended questions providing quantitative data. An example of an open-ended question could be: "How do you think you learn English best?" In this example, the question works as an interview question that allows the participants to respond in their own words (Christensen & Johnson, 2019). Before handing out the questionnaire the researcher emphasized that these types of questions had to be answered in full sentences. This meant that they had to think and write sentences in their own words and explain their answers. It should also be noted that the pupil's answers were written in Norwegian.

Regarding the closed-ended questions, the pupils were for example asked to mark one out of four alternatives concerning how often they spoke English on a daily basis. This is an example of a closed-ended question, as the pupils were provided with ready-made response options to choose from, and the pupils were not required to produce any writing (Dörnyei, 2009).

According to Christensen and Johnson (2019), closed-ended questions can be divided into different categories. Rating scales are the most popular items in research questionnaires. Dörnyei (2009) defines a rating scale as an item that requires the respondent to make an evaluative judgement of the target by marking one of a series of categories organized into a scale (Dörnyei, 2009, p. 27).

One type of rating scale that was used in the questionnaire was the Likert scale. Likert scale consist of a series of statements, all of which are related to a particular target, where the respondents are supposed to indicate the extent to which they agree or disagree (Dörnyei, 2009, p. 27). In the questionnaire, the pupils were asked to respond if they agreed or disagreed with certain statements. For example, "English is important to you," or "You have learned most of your English at school."

Several numerical questions were used in the questionnaire. A numerical rating scale is a scale that includes a set of numbers, where the respondent rates a questionnaire statement on a numerical scale, from for example 1 to10 (Christensen & Johnson, 2019). The pupils were for example asked how good they felt their L2 oral skills were on a scale from 1 to 10. In addition, they were asked to answer how hard or easy they felt it was to speak in English on a scale from 1 to 10.

The questionnaire also included semantic differential scale questions. This is a scaling technique in which the participants rate a series of objects or concepts (Christensen & Johnson, 2019). For example, the pupils were asked to mark the alternatives they found most important for the development of their L2 English.

In addition, the questionnaire included several checklists, which is a list of response categories that respondents check if appropriate (Christensen & Johnson, 2019). The pupils were given different statements regarding the English subject and were asked to check each box that applied to them.

Lastly, several questions concerned how much time they spent on different activities, how often they spoke English outside of school, and whom they spoke English with. In sum, the questionnaire included a lot of different question types.

Only a few issues arose during the completion of the questionnaire. For instance, one pupil was caught writing a lot of nonsense. When the researcher confronted the pupil with this, the pupil told the researcher that he did not care about the study. As a consequence, the pupil was removed from the study in order to ensure the validity and reliability of the research findings. Additionally, some pupils had some questions during the completion of the questionnaire, but these questions were answered and explained.

3.4.4 Vocabulary test

The vocabulary test (see Appendix 5) was inspired by the vocabulary test Sundqvist and Sylvén (2012) used for their research study in Sweden. Sundqvist and Sylvén (2012) based their test on the validated level tests which one can find on the Compleat Lexical Tutor homepage (http://www.lextutor.ca/) (Sundqvist & Sylvén, 2012). The Vocabulary Levels Test (VLT) is one of the most widely used measures of L2 lexical knowledge (Webb et al., 2017). The VLT-test was developed as a means to determine words at four frequency levels (2000, 3000, 5000, 10000) and an academic vocabulary level (Webb et al., 2017). However, Sundqvist and Sylvén (2012) designed the test themselves and included everyday lexical items. Moreover, they divided the test into three categories: (A) Recognition (1000-word level, test items were from the 1000 most frequent English word families), (B) Recognition (2000 level), and (C) Production (2000 level) (Sundqvist & Sylvén, 2012). The purpose of the different parts was to access receptive and productive vocabulary knowledge. Part (A) and (B) tested the receptive vocabulary knowledge, while part (C) tested productive vocabulary knowledge (Sundqvist & Sylvén, 2012).

The vocabulary test designed in this particular research study was quite similar to the one by Sundqvist and Sylvén (2012). However, as opposed to their test, the researcher chose to only include parts (B) and (C) for this research study. The reason why the researcher only included the Recognition (2000 level) test, and the Production (2000 level) test is because the test was to be answered by sixth graders, which means that these are learners who are still in the early stages of their L2 development. Moreover, Webb et al. (2017) argue: "It is only necessary to administer the 2000-word level to beginners, as they are very unlikely to master any of the other subsequent levels (Webb et al., 2017, p.33). The aim of the test was to determine if the pupils could recognize the form/meaning connection of words. Thus, based on the argument above, the researcher found this as the best and most appropriate test solution for this particular research study. Additionally, it was crucial to create a test that the respondents actually were able to answer. If the test was made too difficult and long, it could have become time-consuming for the pupils to complete. This could result in a decrease in the pupils' concentration and motivation due to too difficult questions. Moreover, it could cause a decrease on the pupils' self-esteem, which could lead to a lot of guessing, instead of making the pupils thoroughly think through their answers.

The vocabulary test was divided into two parts. Part (A) was the Production (2000-word level) part of the test, while Part (B) was the Recognition (2000-word level) part of the vocabulary test.

Part (A) consisted of 9 sentences, each with a missing word, but with two or three letters as a hint:

Example 1. *Sample item for the Production (2000- word level) part of the vocabulary test.*

1.) The rich man died and left all his we……. to his son.

In Part (B), each question consisted of words in groups of three, together with six words that served the purpose as distractors. The pupils were asked to pair each of the three words with the most accurate distractor. This part consisted of 5 questions with a total of 15 target items. The 5 questions were constructed as Example 2.

Example 2. *Sample item for the Recognition (2000-word level) part of the vocabulary test.*

1.Dog
2.Wall _____ Part of a house
3.Pencil.
4.Flesh ____ Something used for writing
5.Knife
6.Boots. ____ Animal with four legs

As a result of the pilot test, the vocabulary test was adapted into 9 questions in Part (A) and 5 questions in Part (B), in contrast to the pilot test, which consisted of 18 questions in Part (A) and 10 questions in Part (B). The total sum of points one could score for the adjusted vocabulary test were 24 points, with a maximum score of nine points for Part (A) and 15 points for Part (B).

Before the pupils began answering the vocabulary test, the researcher introduced the test orally. Each part of the test was explained, and questions from the participants were answered. After everything was explained, it was emphasized that both the researcher and the teacher would be present during the completion of the test. No problems were discovered during the completion of the test. All the participants completed the test within 20 minutes, and none of

them had any serious issues completing the test. In sum, the overall impression was that the respondents were able to make sense of the vocabulary test.

3.4.5 Data analysis

The data for the study was gathered through a mixed methods approach, involving both qualitative and quantitative data. The qualitative data in this study was gathered through the open-ended questions in the pupil questionnaire, while the quantitative data was gathered through the closed-ended questions in the pupil questionnaire, the language diary, and the vocabulary test. After having been collected, the data was analyzed. According to Hendricks (2011), before one starts to analyze the data, one must acknowledge the origin points of the data. In this research study, the researcher wished to determine whether or not there existed a possible relationship between the sixth graders' EE exposure and their English vocabulary proficiency.

Hendricks (2011) asserts that each data analysis starts by recognizing the variables. The quantitative data collected in this thesis can be referred to as continuous variables. Hendricks (2011) defines this as "variables describing subjects according to their positions along a sliding scale of values. The data points can fall anywhere along the continuum of possible values" (Hendricks, 2011, p.9). In short, continuous variables are variables where the values are made by measurements. In this study, for instance, the amount of time that each pupil spent on EE activities is reported. If the researcher applies mathematical operations to such values, one can identify concrete relationships between the data (Hendricks, 2011).

To compare the quantitative data and identify patterns between them, it is beneficial to have split the data into different datasets, which was the case in this study. According to Hendricks (2011), this allows the researcher to separate subjects within each independent-variable category, and it makes it easier when comparing the responses (Hendricks, 2011).

This research study aimed to compare the variables mentioned above with the pupils' test scores on the vocabulary test, to explore whether there might exist a relationship between these variables and the pupils' English vocabulary proficiency. To give an overall impression of the gathered data in this study, the researcher presents the statistical data in the next chapter by using descriptive statistics to provide basic information about the data and highlights potential relationships between the variables. The statistics are shown by measurements of central tendency, that is, mean scores, and by measurements of variability, shown by standard

deviation. The descriptive statistics presented in this thesis were produced through Microsoft Excel.

As for the qualitative data in this study, open-ended questionnaire items were analyzed as follows. The researcher read through the pupils' responses and based on their responses it enabled the researcher of summarizing the trends on how the pupils believed they learned English. This summary will be presented in Chapter 4.

3.5 Validity and reliability

Christensen and Johnson (2019) define research as: "Systematic investigation using appropriate methodologies to provide justified answers to questions about our world" (Christensen & Johnson, 2019, p.4). In other words, research refers to systematic investigation to make sure that one's findings can be trusted. Moreover, Christensen and Johnson (2019) argue that the word "proof" should be eliminated from one's vocabulary within the context of research, since the word "evidence" is a more suited word for the situation. In some cases, the evidence is very strong, which would indicate that one's findings can be trusted, while sometimes it will show the opposite. Therefore, strong evidence will be an important aspect for every study to show that one's findings can be trusted. One can say that a test or instrument is valid if it measures what it is supposed to measure (Cohen et al., 2007). In other words, the accuracy of a measure, while reliability is referred to as the consistency of a measure.

According to Cohen et al. (2007), validity is a key element to any effective research, because if a piece of research is invalid, it cannot be used in the research.
Additionally, Cohen et al. (2007) argue that threats to validity and reliability can never be fully erased, and only the effects of these threats can be reduced by paying close attention to validity and reliability throughout the research study. One should view validity as a matter of degree, rather than an absolute state, as one strives to minimize invalidity and maximize validity (Cohen et al., 2007). In other words, the data of any research has to be thoroughly analysed to ensure its validity.

Validity and reliability can be achieved through several ways. For instance, through the honesty of the respondents, the richness and scope of the data, careful sampling, the extent of triangulation, and appropriate instrumentation (Cohen et al., 2007, p. 144). These are examples of considerations that were taken into account to ensure the validity and reliability of the data achieved. All of these considerations are discussed below.

According to Fraenkel et al. (2012), it is crucial that the information the researcher obtains through the use of an instrument serves its purpose. In addition, to minimize threats to validity one should select the appropriate instruments to gather the type of data that is required for the research (Fraenkel et al., 2012). Moreover, Zohrabi (2013) claims that the researcher should use different procedures in the data collection since collecting varied types of information through different sources can help enhance the reliability of both the data collection and the results (Zohrabi, 2013). This process can be referred to as triangulation, which is a validation approach based on the search for convergence of results obtained by using multiple investigators, methods, data sources, and/or theoretical perspectives (Christensen & Johnson, 2019). The purpose of this approach is that it builds into one's research study and processes systematic cross-checking of information and conclusions through the use of multiple procedures. (Christensen & Johnson, 2019). Triangulation is said to occur when findings converge on the same conclusions. However, in some cases, findings will not converge but diverge. Christensen and Johnson (2019) argue that this is not necessarily a problem because it can be useful and important to look at objects in several ways and learn from the different methods and perspectives. As a result of this, several instruments were chosen for this research study.

First of all, it was, therefore, necessary to choose the appropriate instruments for this particular mixed methods study. Thus, a language diary, a mixed questionnaire, and a vocabulary test were seen as the most appropriate instruments to ensure the richness of the obtained data, in order to help the researcher towards a conclusion on the selected research questions. It was therefore both important and necessary to pilot and improve the research tools to ensure valid and reliable findings. As a way of preventing unreliable answers from the pupils, the language diary, the pupil questionnaire, and the vocabulary test were provided in Norwegian. This was done to make sure that the participants understood what they were supposed to do.

The pupil questionnaire was improved by making it shorter, using fewer words, and including questions and options that were easy to understand. It was also essential to make sure that the questions being asked were relevant to the topic of the study.

In the same manner as the questionnaire, the vocabulary test was piloted and as a consequence improved. The main adjustment that had to be made was to make the vocabulary test shorter. According to Brainbalancecenter (2019), the total attention span of children 10 to 12 years of age, lays between 20 and 36 minutes. Therefore, the test was adapted and shortened so that it would take approximately 20 minutes to complete. The purpose was to

help the participants stay concentrated throughout the completion of the test. If the test was too long and took too much time, some pupils could get less focused, restless, and willing to finish the test as quickly as possible.

Additionally, the pilot test gave the researcher a good indication of the functionality of the test in terms of difficulty and feasibility. It was, therefore, necessary to use a test that was adjusted towards the level of the participants. Based on the pilot test the functionality of the test performed well. In addition, Webb et al. (2017) argue that it is only necessary to administer the 2000-level test to beginners since they are unlikely to master any of the other levels. The vocabulary test was therefore seen as an appropriate instrument for the particular occasion and the purpose of the study.

Valid answers are important for any research study, so the participants need to be honest and sincere in their answers. For instance, some pupils may have a tendency of trying to answer what they think the teacher/ the researcher wants them to say. This is often referred to as the "Halo effect", which means that the participant is trying to answer correctly instead of honestly (Dörnyei, 2009, p. 9). As a way to circumvent this, Dörnyei (2009) asserts that it is wise to remind the participants to answer honestly both before and during the participation in research, as a way to ensure the validity of the data. Moreover, it is wise to consider carefully who you choose to participate in the study, so that the appropriate participants are chosen. As mentioned in Sub-section 3.4.1, the participants in this research study were chosen through a convenience sampling. They were willing to be a part of the study. Moreover, the research topic was something they spent a lot of time on, which seemed to motivate the participants even more.

Another aspect to ensure the validity and reliability of the data collection was the researcher's observations during the completion of the research tools. The researcher was present during the completion of both the questionnaire and the vocabulary test. The researcher emphasized several times that it was really important that they answered as honestly as possible before and during the completion of the pupil's questionnaire and the vocabulary test. During the completion of the questionnaire the researcher only discovered one case that was necessary to address. One participant was observed just typing a bunch of letters on the exploratory questions. When the pupil was confronted with this, he said that he did not care about the study. His answers were therefore viewed as invalid, and the pupil was removed from the study, to ensure the validity and reliability of the findings.

However, it was harder to observe the completion of the language diary since this relies on self-report, which could have flaws regarding validity and reliability. Moreover, the

participants are younger learners, and it can be hard to remember the exact time they have spent on EE activities. Additionally, one can expect that some of the participants will forget to fill out the diary some days. Therefore, to circumvent this from happening the researcher gave a detailed introduction and reminded the pupils about the importance of answering the language diary as honestly as possible. Another decision made to ensure the validity of the diary was to make the teachers include the language diary in their homework so that the pupils were reminded to fill out the language diary each day. The language diary was originally designed to last for two weeks. However, the teachers of the two classes told the researcher that the second week had some challenges. Many pupils lost their diaries during the second week, and many participants forgot to fill out their diaries. As a consequence, the researcher decided to make the participants fill out their language diaries electronically, and due to a lack of time, the language diaries had to be cut down to just one week. This decision was made to ensure the reliability and validity of the research.

3.6 Ethical considerations

Fraenkel et al. (2012) argue: "It is a fundamental responsibility of every researcher to do all in his or her power to ensure that the participants in a research study are protected from physical or psychological harm and discomfort" (Fraenkel et al., 2012, p. 63). In other words, whenever one is doing a research study where participants are a necessity, ethical considerations need to be taken into account. As Dörnyei (2007) argues, in a mixed methods approach, such as the present study, there is an increased likelihood for the occurrence of ethical dilemmas. As a researcher, it is important to be prepared for the different ethical dilemmas one can encounter in order to, for example, reduce both doubt and insecurities among the participants. Moreover, reducing insecurities among the participants will increase the validity of the data collection. During this research study, several ethical considerations were encountered.

First of all, the researcher had to receive approval from NSD, *Norsk Senter for Forskningsdata,* before being able to collect any data for this project. This was done in advance, as the researcher could not start collecting any data before the study was approved by the NSD (see Appendix 1). The NSD is responsible for certifying research projects within the Norwegian context, and they have high standards when it comes to ethical and legal guidelines. The only personal information the participants in the project had to give was their first names and which class they were in. This became one of several ethical considerations in

the present study. According to Dörnyei (2007), ideally, the participants should remain anonymous. However, it is often needed to identify the respondents to be able to match their performances on various instruments or tasks (Dörnyei, 2007, p.65). In this case, the participants' names were needed to connect the answers from the language diaries and questionnaires to the scores on the vocabulary test. It should be noted that the personal information was only available to the researcher, and in the publication of this study, this information is totally anonymous. Moreover, all the gathered data from the language diaries, pupil questionnaires, and vocabulary tests were kept confidentially until the end of the project and then deleted. Everything was modified to ensure that nothing could be traced back to any of the participants.

As soon as the NSD had given their approval, the data collection could start. Since the participants were Norwegian sixth graders at the age between 11-12, an informed consent was needed. The participants had to be informed about the purpose of the study and why the research was conducted. Furthermore, they needed to be informed about their rights, in addition to information about their opportunity to withdraw from the study. Additionally, the participants were given information about the type of questions they would be answering and the confidential treatment of this data (Dörnyei, 2007). All of these ethical considerations were accounted for when the researcher introduced the project in the two classes and handed out the consent form (Appendix 2).

Even though most of the pupils were eager to join the research study and gave their consent to the researcher orally, nothing could be done before their parents or legal guardians had signed the consent form, which allowed the pupils to take part in the study. This was a necessity since all the pupils were under the age of 18, which is the legal age in Norway. Therefore, the participants' parents needed to be informed of the range and scope of the project. After the researcher had introduced the study to the pupils, the consent form was sent home in paper and then handed to their teacher as soon as the parents' signatures had been received. When the researcher came back to visit the two classes and to collect the signed consent forms, it was explained that it was now completely up to them to decide whether or not they wanted to participate in the study. Moreover, the pupils were informed that they could withdraw from the study at any stage of the project. This was an important clarification since this was a part of the ethical requirements concerning the treatment of the participants. Before participating in the questionnaire, the language diary, and the vocabulary test, the pupils were reminded that their answers would be treated confidentially.

4.Results

4.1 Introduction

In this chapter, the results from the language diaries, the pupil questionnaires, and the vocabulary tests are presented. The collected data provides information on Norwegian sixth graders' EE habits, their exposure to EE, and their beliefs and attitudes towards the English subject and their English vocabulary proficiency. Importantly, it should be noted that the answers are self-reported and are therefore based on the self-assessment of the participants' experiences with and attitudes to English and EE exposure.

Section 4.2 reports the results obtained from the pupils' questionnaires. Moreover, Section 4.2 is divided into 5 sub-sections. Sub-Section 4.2.1 provides some general background information, while Sub-section 4.2.2 reflects the pupils' attitudes and beliefs about English learning. Sub-Section 4.2.3 gives an overview of the pupils' beliefs about their own learning of English. Sub-section 4.2.4 concerns the pupils' EE exposure and EE habits and, lastly, Sub-Section 4.2.5 addresses the EE activity, such as playing digital games. Section 4.3 presents the results from the pupils' language diaries, which were filled out by 45 pupils during one regular school week. Additionally, Sub-section 4.3.1 investigates the gender distribution within the 5 most popular EE activities that were reported in the language diary. Section 4.4 presents the results of the vocabulary test. Section 4.5 compares the reports in the language diary to the total scores on the vocabulary test. This section is divided into two sub-sections. Sub-section 4.5.1 concerns the possible relationship between the scores on the vocabulary test and EE exposure, while Sub-section 4.5.2 shows the relationship between the three most popular EE activities and the scores on the vocabulary test. Finally, Section 4.6 compares the scores on the vocabulary test to the pupils' attitudes and beliefs. Section 4.6 is divided into two sub-sections. Sub-section 4.6.1 compares the pupils' attitudes towards English to their scores on the vocabulary test, while Sub-section 4.6.2 compares the pupils' beliefs about their vocabulary to their scores on the vocabulary test.

4.2 Pupil questionnaire

4.2.1 General background information

Forty-five pupils participated in the questionnaire, namely 23 girls and 22 boys. The first two items in the questionnaire concerned the pupils' names and which class they belonged to. Questionnaire item 3 concerns whether or not the participants had access to their own digital

device or not. Questionnaire item 3 revealed that each of the participants in the study had access to their own digital devices.

The following questionnaire item, namely Questionnaire item 4, is a follow-up question to Questionnaire item 3. Questionnaire item 4 investigates how many of the pupils who had access to their own digital device, also had access to the internet. Based on the findings in Questionnaire item 4, each participant who had access to a digital device also had access to the internet. These findings indicate that all of the pupils had access and the possibility to engage in EE activities.

4.2.2 Attitudes towards and beliefs about English

The following figures present information regarding the pupils' attitudes to and beliefs about the English subject.

Figure 1 shows how well the participants liked English, differing between "I like English very much, I like English a lot, I like English a little bit and, I do not like English."

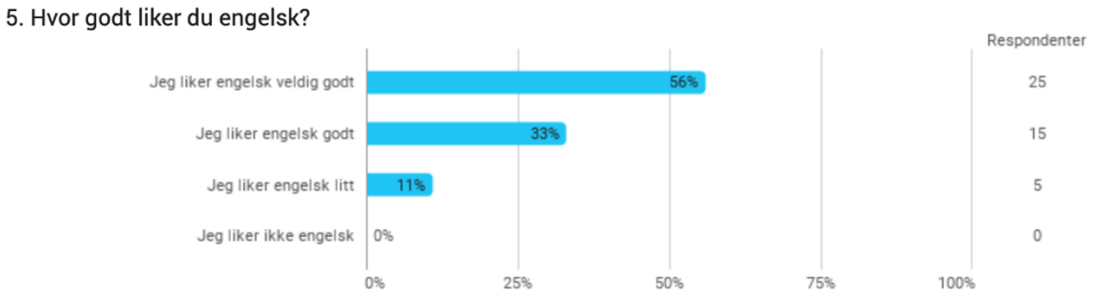


Figure 1: Questionnaire item 5: How well do you like English?

Figure 1 reveals that all of the participants liked English to a certain degree, as none of them answered that they did not like it at all. Only five pupils answered that they liked English just a little. Fifteen pupils answered that they liked English well, while a total number of 25 pupils answered that they liked English a lot.

Furthermore, in questionnaire item 6 the pupils were asked to answer in full sentences whether or not they viewed the English subject as important and why. The majority of the pupils wrote that English was important to them. Additionally, the large majority of the pupils, namely 33, wrote that English would be important for their future to communicate with people from different countries and to make themselves understood when traveling to English-speaking countries. Interestingly, five pupils specifically wrote that being sufficient

in English was important to them because it made their engagement in EE activities much easier.

Figure 2 shows the pupils' self-evaluation of their oral skills in English, on a scale of 1 to 10, where Level 1 is very poor, Level 2-3 is not very good, Level 4-5 is good enough, Level 6 is good, Level 7-8 is more than good, and Level 9-10 is very good. In addition, the participants could rate their oral skills to be Level 11. Level 11 indicates that the participants believe their oral skills are excellent.

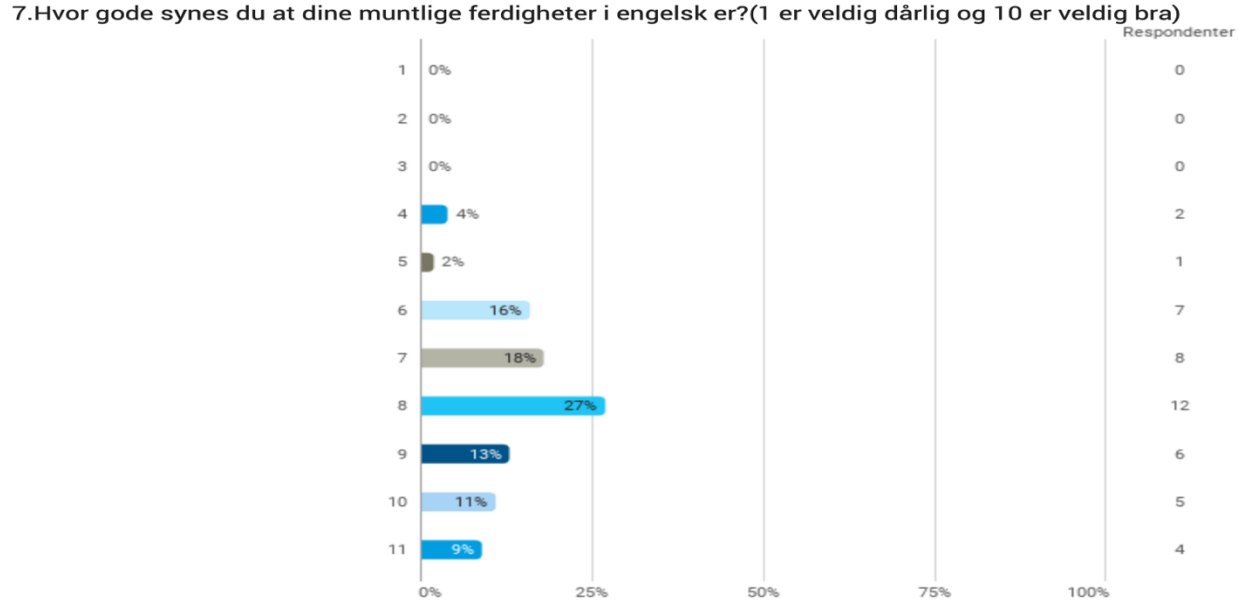


Figure 2: Questionnaire item 7: How well do you think your oral skills in English are on a scale of 1-10?

Figure 2 shows quite spread results among the pupils. The lowest the participants rated their oral skills was Level 4. Only two participants rated their oral skills to be Level 4. One participant rated his/her skills to be Level 5. The majority of the participants rated their oral skills between 6 and 9. The most frequent level was Level 8; with a total of twelve participants. Interestingly, four participants rated their oral skills as excellent.

Figure 3 concerns how satisfied the participants are with their vocabulary in English, on a scale from 1 to 10. Level 1 means not at all satisfied, Levels 2-3 mean very little satisfied, Levels 4-5 mean partly satisfied, Level 6 means satisfied, Levels 7-8 mean more than satisfied, while Levels 9-10 indicate that the pupils are very satisfied. In addition, Level 11 means that the pupils are extremely satisfied with their vocabulary.

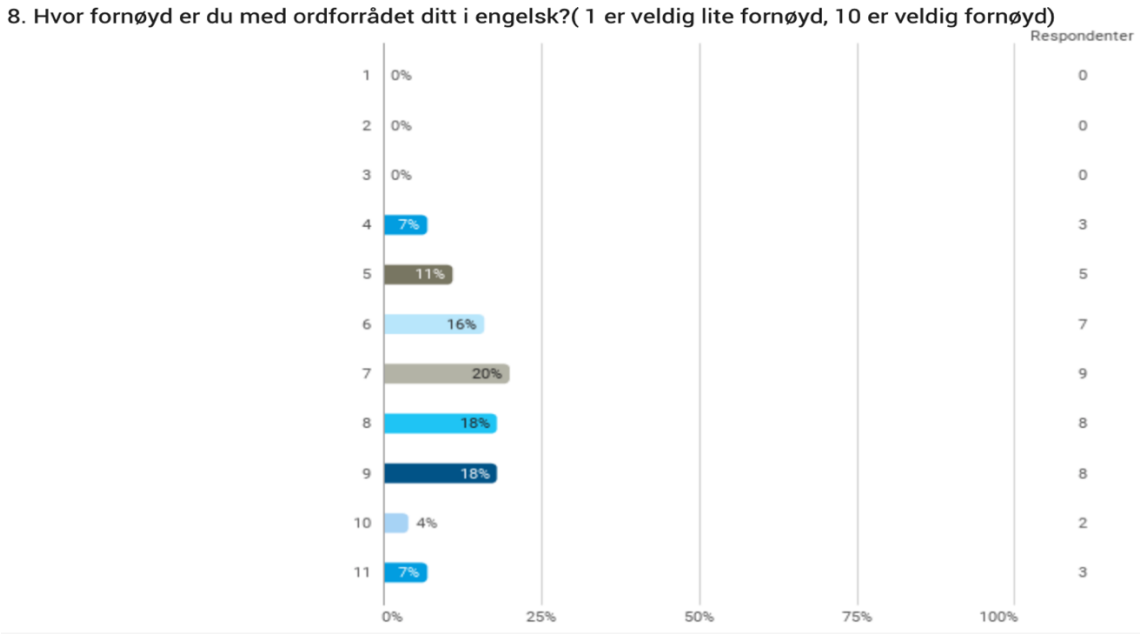


Figure 3: Questionnaire item 8: How satisfied are you with your vocabulary in English?

Figure 3 shows that the lowest the participants rated their vocabulary was Level 4. In total, eight pupils answered that they were only partly satisfied with their vocabulary. Most of the students evaluated their vocabulary between Levels 6 and level 9. Two pupils rated their vocabulary to be Level 10, while three students were extremely satisfied with their vocabulary.

Figure 4 shows how difficult or easy the participants thought it was to talk with other people in English on a scale from 1 to 10. Level 1 means that the pupils found this extremely hard, Levels 2-3 mean that the pupils found it very hard, Levels 4-5 mean that the pupils found this to be hard enough, Level 6 means that the pupils found this to be easy, Levels 7-8 mean that the pupils found this to be more than easy, while Levels 9-10 mean that the pupils found this to be very easy. In addition, Level 11 means that the pupils found this to be extremely easy.

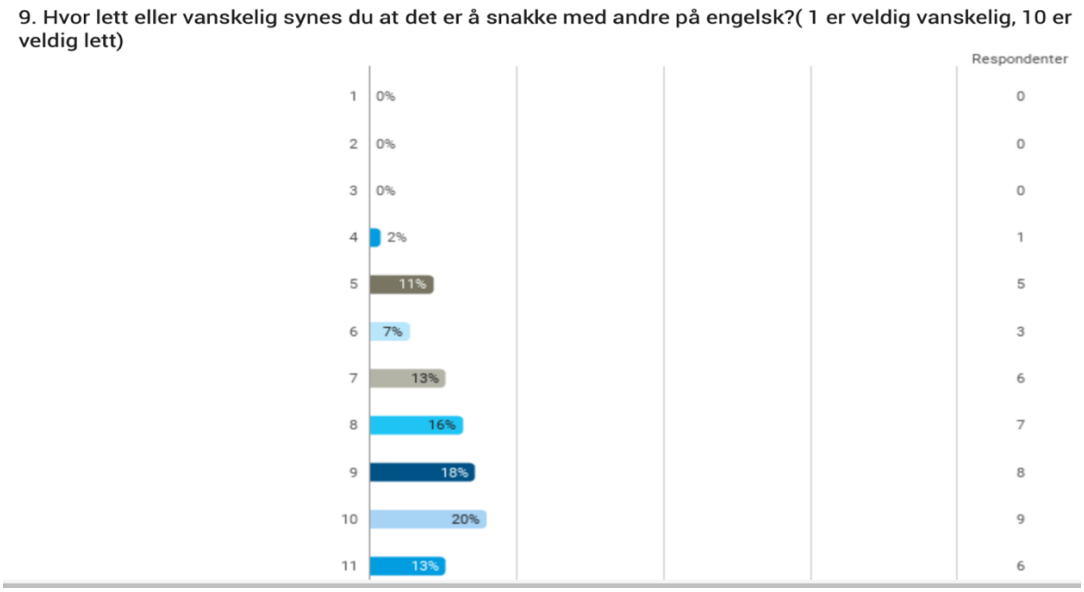


Figure 4: Questionnaire item 9: How hard or easy do you find it to speak with other people in English?

Figure 4 shows that six participants found it hard enough to speak with other people in English. Interestingly, most of the participants rated it to be very easy to talk with other people in English. A total number of nine participants rated this to be Level 10, in other words very easy, while the majority rated the difficulty of talking with other people to be between Level 7 and Level 10. Moreover, six pupils believed that talking with other people was extremely easy.

Figure 5 reveals which elements at school the pupils found most important to learn English as an L2.

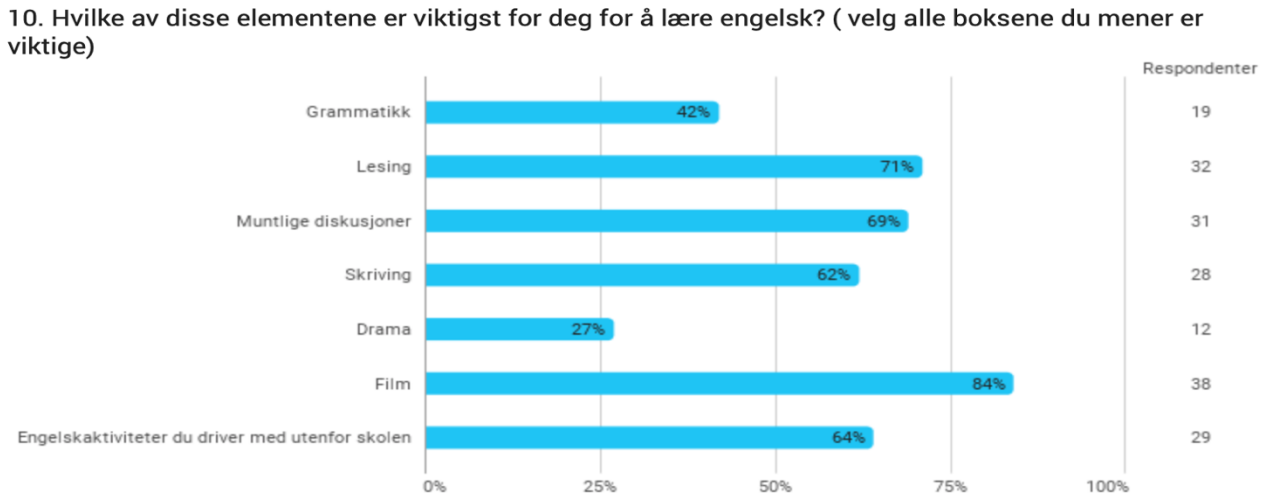


Figure 5: Questionnaire item 10: Which elements of English do you find the most important to learn English? (Check each box that is important to you)

Based on the findings in Figure 5, the activity which the participants found less important was drama. In contrast, the participants believed that watching films in English was the most important element for their English learning. A total number of 38 participants claimed this to be important. Additionally, 32 participants believed that reading was an important skill for their L2 learning. Reading and writing were skills which most of the participants believed to be important. Moreover, 29 participants asserted that EE activities were important for their English L2 learning.

Figure 6 presents seven statements about English; the participants were asked to check each of the statements that applied to them.

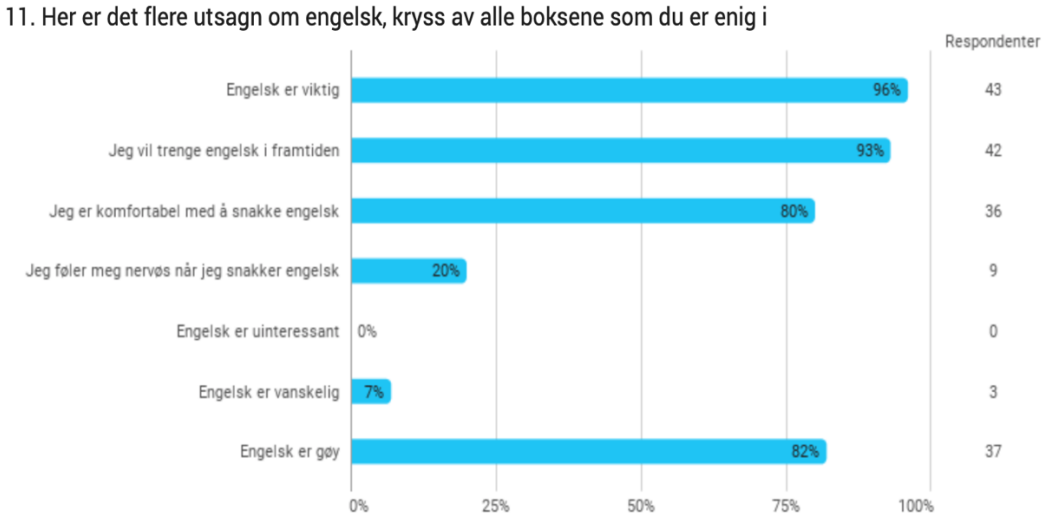


Figure 6: Questionnaire item 11: The following presents several statements about English (check each of the boxes that you agree on).

The findings show that 43 out of 45 pupils stated that English was important to them. In addition, 42 participants believed that they would need English for their future. Thirty-six participants stated that they felt comfortable about speaking English. This was an interesting finding, as this number was a lot higher than what the researcher had expected. Nine participants stated that they felt nervous when they were speaking English. However, none of the participants answered that English was not interesting, and only three pupils stated that they found English to be difficult. Lastly, a total number of 37 pupils answered that English was fun.

Questionnaire item 12 concerns to what extent the pupils agreed or disagreed with the statement “I learn English best at home”. The participants’ attitudes towards this statement did not turn out to be very conflicting. Two pupils answered that they slightly disagreed. Ten pupils were not sure if they learned English best at home or at school. However, the majority

of the participants, namely 18, answered that they agreed that they learned most of their English at home. Eight pupils answered that they agreed very much with the statement that they learned English best at home, while seven pupils slightly agreed with this statement.

4.2.3 The pupils' beliefs regarding how they learn English best

Questionnaire item 13 included an open-ended question in order to obtain qualitative data. The participants were asked to elaborate on how they believed they learned English the best. In total, 44 participants answered the question, while one pupil did not answer the question. The most considerable finding was that a total number of 30 participants answered that they believed that watching English films, TV series and videos online were the activities that were the most important for their English development. Additionally, many of these pupils wrote that these were activities they participated in daily. Some of them further emphasized that while watching films, TV series, and videos they often used Norwegian subtitles as a way to understand unfamiliar words. Moreover, some of the pupils added that they sometimes watched films and TV series with English subtitles, and by doing so, they argued that they learned new words, as well as the correct spelling of the words. It was also emphasized by many pupils that watching TV, films and videos helped them learn how to use different words for the right situation and setting. In addition, when both listening to and viewing other people speak the TL, the pupils argued that it helped them learn how to say English words with the proper pronunciation. Overall, many pupils expressed that this was more fun and a motivating way of learning English.

Fifteen pupils wrote that gaming was an activity they viewed as important for their English development. The majority of the pupils explained this by emphasizing that all of the game instructions were given in English, which forced them to use their English knowledge to understand what the given task asked them to do. Moreover, the different props which are used in the games are named in English. Based on the pupils' answers, this helped them expand their English vocabulary knowledge because seeing the English word together with a visual image of the different props over and over again enabled them to remember the word. Many of the participants commented that when playing digital games, they often spoke English with other players through a microphone or a chat. They further argued that this was an effective way of learning English because talking English in these situations was both fun and helped them overcome obstacles in the games.

Another interesting finding was that 15 pupils believed that speaking English with other people was an activity they learned a lot of English from. Based on what the pupils wrote, the people whom the pupils spoke to varied from family, friends, and classmates to people they spoke with online, in chat rooms, or through digital games.

Ten pupils believed reading helped them develop their L2 English proficiency. Moreover, ten of the pupils wrote that they learned English best at school and listed a couple of school activities they believed helped their English development. For instance, activities such as oral presentations and roleplay. Four out of ten pupils wrote that they thought "Readers Theatre" was an activity that helped them learn a lot from. Readers Theatre is an activity where the pupils are divided into groups, and where they are given a script. The groups are given time to prepare and perform the script. The pupils emphasized that this activity helped them because they practiced their spoken English, and they could also help each other with pronunciation and explain to each other what certain words meant if necessary. Lastly, two pupils wrote that oral presentations helped them learn English since this was an activity that gave them time to prepare, learn new words, and practice their English before presenting the project.

4.2.4 The pupils' exposure to English and their EE habits

This section shows findings regarding the pupils' exposure to English and their EE habits. Questionnaire item 14 concerns how many of the participants had been to an English-speaking country where they had to speak English. The findings in Questionnaire item 14 revealed that 44 pupils had been to an English-speaking country, making it a total of 98 % of all the participants. There was only one participant who had not been to an English-speaking country.

Figure 7 shows whom the pupils talked English to in their spare time.

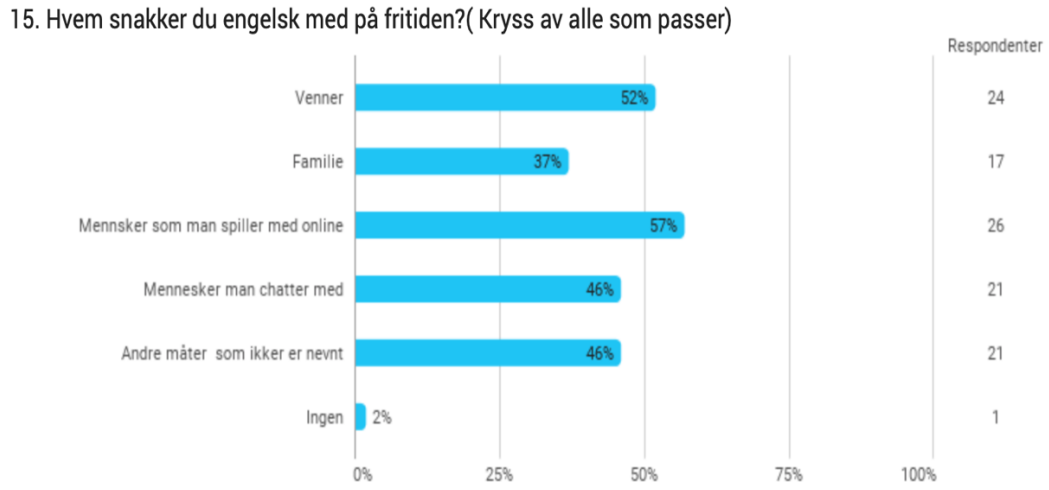


Figure 7: Questionnaire item 15: Who do you speak English to in your spare time? (Check each box that applies)

Figure 7 reveals that a good number of the pupils spoke English with their friends, as 24 participants answered that they spoke English with their friends. Interestingly, the majority of the pupils, a total number of 26 pupils, answered that they spoke English with people online, while they were playing digital games. Moreover, 21 pupils answered that they wrote/talked English when they were chatting with other people online. Additionally, 21 pupils answered that they spoke English in other ways than those listed in Figure 7. In sum, only one participant answered that he/she did not speak English to anyone.

Figure 8 concerns how often the participants speak English in their spare time.

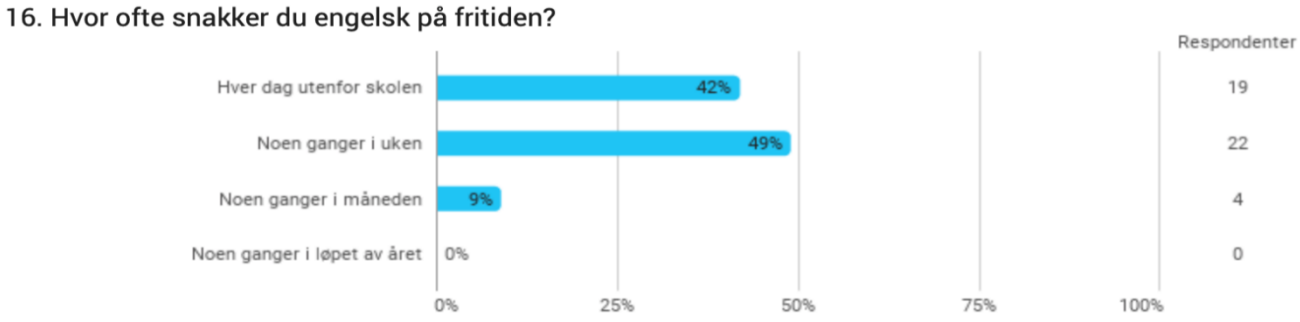


Figure 8: Questionnaire item 16: How often do you speak English in your spare time?

Questionnaire item 16 shows that the majority of the participants spoke much English outside of school in general. Nineteen pupils believed that they spoke English every day outside of school, while 22 pupils answered that they spoke English sometimes during a week. Four pupils answered that they spoke English sometimes during a month.

Figure 9 gives an overview of the kinds of EE activities the sixth graders participated in.

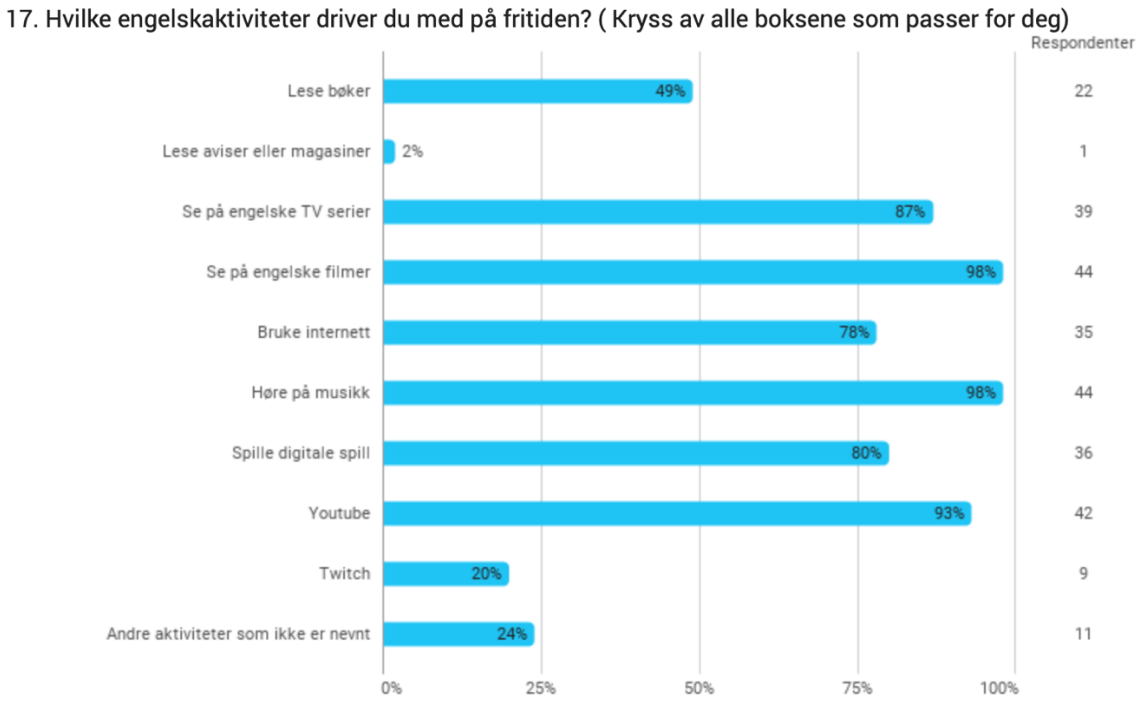


Figure 9: Questionnaire item 17: Which EE activities do you spend time on in your spare time? (Check each activity that applies)

Figure 9 shows that the two most popular EE activities among the participants were watching English movies and listening to music. Forty-four pupils answered that they spent time on these two activities. Twenty-two of the participants in the questionnaire answered that they read English books in their spare time. YouTube was also a popular activity among 42 pupils, while 39 pupils answered that they spent time watching English TV series. Thirty-five pupils spent time browsing the internet, while only one pupil read newspapers and magazines. In terms of playing digital games, 80% of the participants played digital games, 36 pupils answered that they spent time on this activity. Lastly, eleven pupils stated that they spent time on other activities than those listed in the questionnaire.

Questionnaire item 18 asked the pupils to write down if they participated in any other activities than the EE activities listed. The most common answer was that most of the activities which they spent time on were already listed. However, five participants stated that they often did a lot of singing in English in their spare time, while another three pupils wrote that Tik Tok was an app where they encountered a lot of English. In addition, they claimed that they wrote some English during the use of this application. Two participants wrote that they used a social media, called Discord, which is an app that was created as a means for people to communicate through text, voice, or video while playing digital games. Lastly, two

pupils wrote that they quite often spoke English with their family members as a way to practice and develop their English.

Figure 10 concerns how much time the participants believed they spent watching movies, videos, and TV series in English.

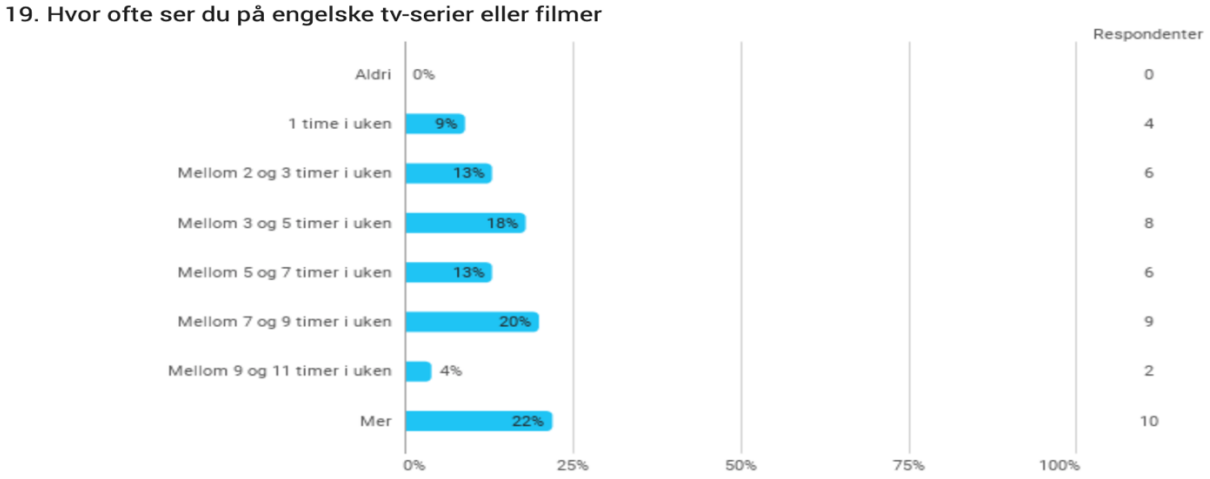


Figure 10: Questionnaire item 19: How much time do you spend watching movies, TV series, or videos online in English each week?

Based on the findings in Figure 10, all of the participants spent a fair amount of time on this activity regularly. Four pupils spent at least 1 hour each week watching English videos or TV series. Six pupils believed that they spent between two and three, while eight spent between 3 and 5 hours on this activity. Six pupils spent between 5 and 7 hours and nine pupils spent between 7 and 9 hours each week. Out of all of the 45 participants, only two believed they spent between 9 to 11 hours on English. Most noteworthy, the majority of the participants claimed that they spent more than 11 hours each week on English videos, movies, and TV series.

Figure 11 gives an indication of the participant's views on the potential learning outcome from watching movies, TV series, and videos online in English.

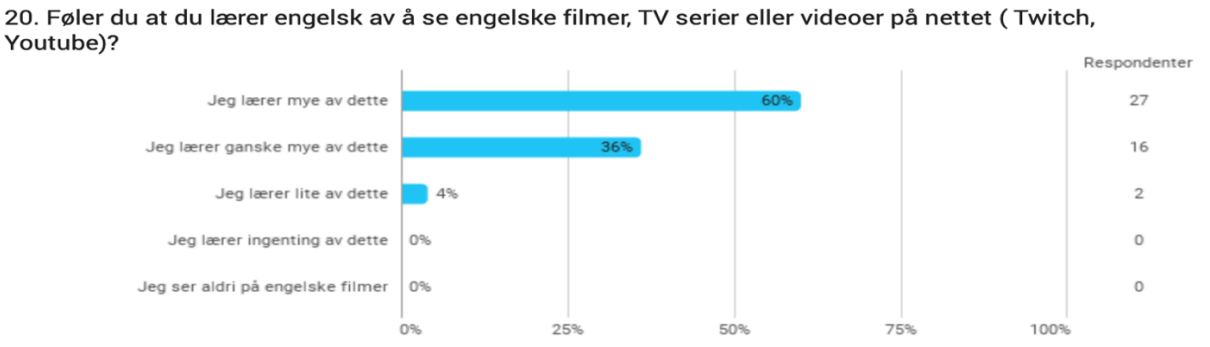


Figure 11: Questionnaire item 20: Do you think you learn English by watching movies, TV series, and videos in English?

Figure 11 reveals that none of the participants believed that they did not learn any English while watching movies, TV series, and videos in English. The large majority of the participants believed that they learned a lot of English while engaging in this activity. Moreover, a large number of the pupils stated that they believed they learned pretty much by this activity, including a total of 16 pupils. Two pupils believed they learned just a little from this activity.

Figure 12 shows how frequently the participants read in English.

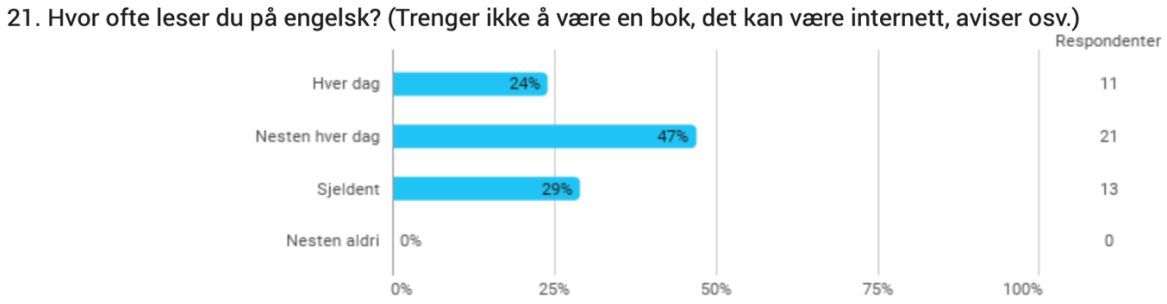


Figure 12: Questionnaire item 21: How often do you read in English? (It does not need to be a book, it could be when browsing the internet, reading newspapers, etc.)

Figure 12 reveals that most of the pupils read in English almost every day. Eleven pupils read in English every day, while 21 pupils claimed that they read in English almost every day. Thirteen students answered that they seldom read in English. Interestingly, the findings indicated that 32 out of 45 pupils read in English on a general basis.

Figure 13 concerns how much time the pupils believed they spent listening to music a week.

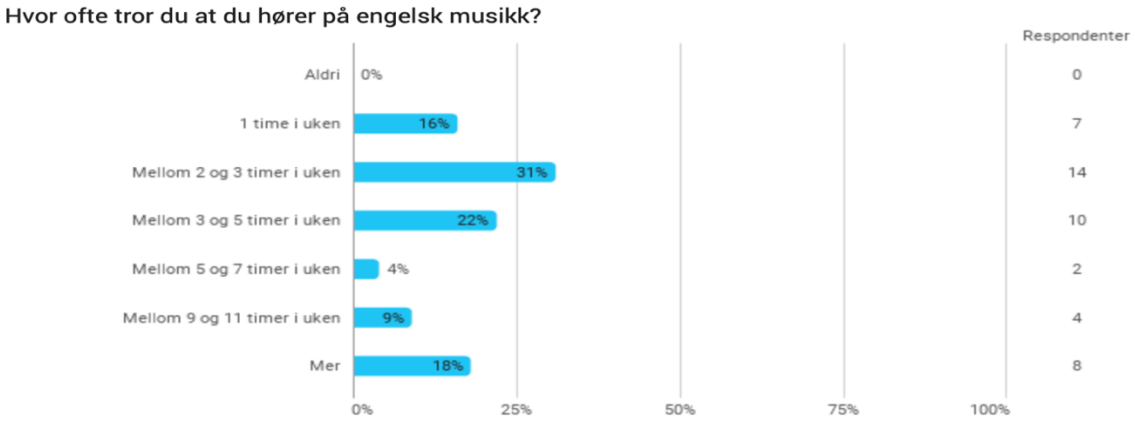


Figure 13: Questionnaire item 22: How much time do you believe you spend listening to music in English each week?

Figure 13 shows that listening to music was an activity all of the participants claimed that they spent time on every week. Seven pupils believed they spent 1 hour a week listening to music. Most of the participants believed that they spent between 2-5 hours a week. Fourteen pupils believed they listened to music between 2-3 hours weekly, while another ten pupils believed they listened to music between 3-5 hours a week. Moreover, eight pupils believed they spent more than 11 hours a week listening to music.

Figure 14 shows the pupils' beliefs about the learning outcome of listening to music.

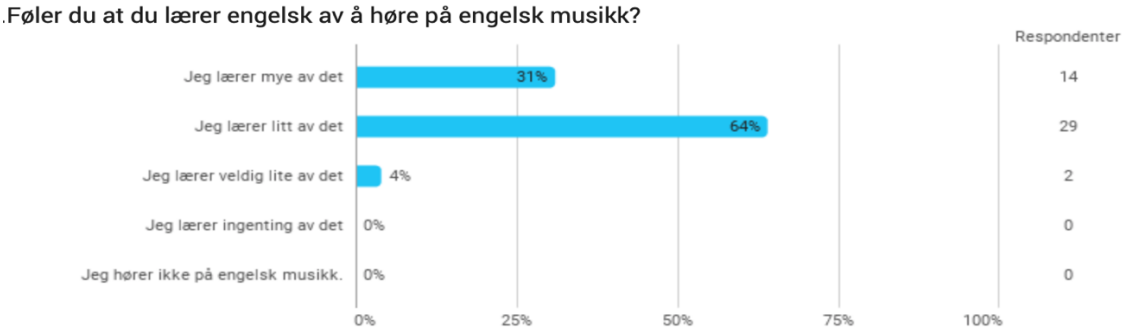


Figure 14: Questionnaire item 23: Do you believe that you learn English while listening to music?

Figure 14 shows that all of the participants believed that they learned English to some degree, by listening to music in English. Fourteen pupils stated that they learned very much by listening to music, and two pupils answered that they learned very little. Moreover, a total number of 29 pupils claimed that they learned some English by listening to music.

4.2.4 Gaming as an EE activity

This section shows findings regarding the pupils' gaming habits.

Figure 15 gives information on the pupils' gaming habits, more specifically the amount of time they believed they spent playing digital games during a week.

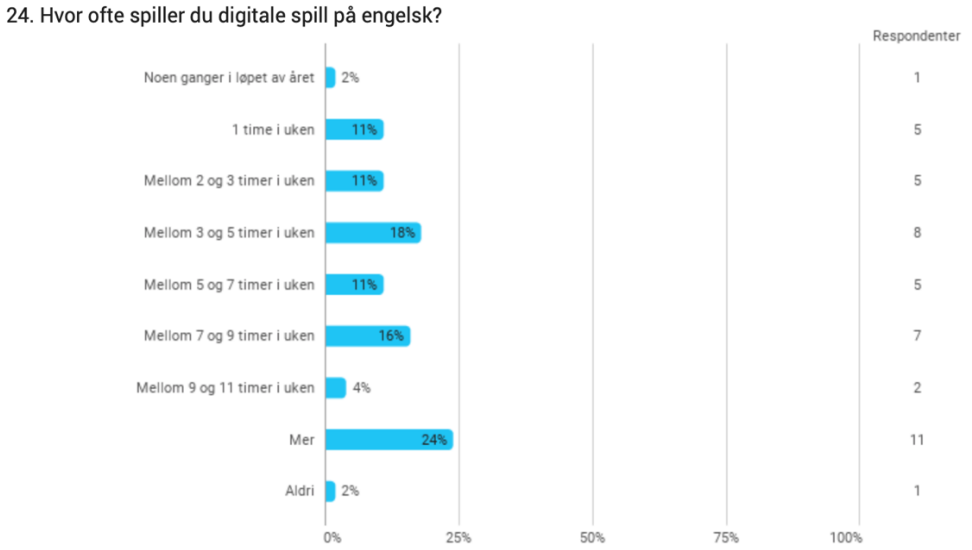


Figure 15: Questionnaire item 24: How much time do you spend playing digital games in English?

Figure 15 indicates that almost everyone spent some time on digital games to a certain degree. Only one pupil answered that he/she never played digital games, and only one pupil answered that he/she only played digital games a couple of times during a year. Seven pupils stated they spent between 7-9 hours weekly playing digital games. Two pupils answered that they spent between 9 and 11 hours playing digital games. Interestingly, the most frequent answer among the pupils was that they spent more than 11 hours a week on digital games.

Figure 16 concerns the pupils' perceptions of the potential learning outcome they could get from playing digital games.

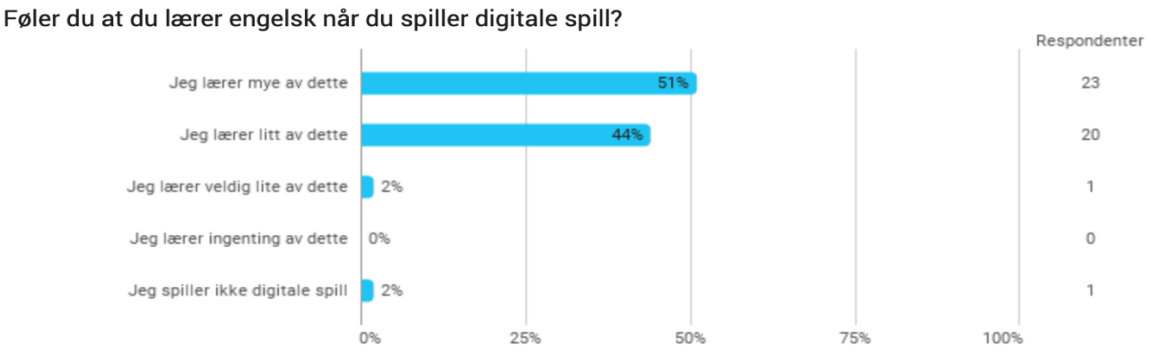


Figure 16: Questionnaire item 25: Do you believe that you learn any English while playing digital games?

Figure 16 shows that none of the pupils believed that they did not learn anything at all while playing digital games. However, one pupil answered that he/she did not play digital games. A total number of 23 pupils, believed that they learned a lot of English, as a result of playing digital games. Moreover, 20 pupils claimed they learned some English while playing digital

games. One pupil stated that he/she learned just a little English while engaging in digital games. In total, there were a considerable number of participants who believed they learned English as a result of playing digital games.

Questionnaire item 26 asks the pupils to name their three favourite digital games. Based on the findings in Questionnaire item 26, the findings showed that there were specifically three digital games that were more popular than others. The most popular game among the pupils was Minecraft, a total number of 17 pupils answered that they played Minecraft. Additionally, 13 pupils wrote that they played *Fortnite*, while 14 wrote that they played *Roblox*.

4.3 Language diary

The participants were instructed to fill out the language diary each day for one week and to write down the time they spent on the activities listed in the diary, as well as writing down if they spent any time on other activities which were not listed in the diary.

Before addressing the findings in the language diary, it should be emphasized that this method relies on self-report and this may have flaws regarding reliability. As one knows, it can be hard to remember the exact time one has spent on an activity. In other words, it would therefore be wise to assume that estimates could have been made (Sundqvist & Sylvén, 2012). As a way to address the issue of reliability, a quantitative comparison of the findings from the pupil questionnaire data corroborated the findings from the diary. For instance, the individual beliefs from the questionnaire, regarding the amount of time the participants believed they approximately spent on EE activities per week, corroborated well with the findings in the diary. In the questionnaire, the participants did not write down an exact number, but they answered based on some given numbers, or if they believed that they spent more time than these numbers. A lot of the participants answered that they believed that they spent more time on the EE activities than the numbers given in the questionnaire. This corroborated the data findings in the language diaries as the numbers, in general, were a little bit higher in the diary.

Additionally, in the questionnaire, 11 participants answered that they believed they spent more than 11 hours per week playing digital games. In comparison, the diary data revealed that ten of the 11 participants who answered that they spent more than 11 hours playing digital games in the questionnaire noted a higher amount of time spent on this activity in the language diary. Besides, the one pupil who did not spend more than 11 hours per week noted a number a little under 11 hours in the language diary. This showed that the pupils' estimates in the questionnaire were quite accurate compared to the reports in the language diary.

Moreover, Figure 21 in the questionnaire findings showed the most popular digital games among the participants, while the same game titles were found in the language diaries. Based on these corroborations, the researcher considers the diary data as reliable.

In terms of the participants' engagement in EE activities, the language diary revealed that the participants spent, on average, a total mean of (M=25.1) hours per week on such activities, although the individual variation was large (SD=12,9). Additionally, an interesting observation was that the numbers ranged from 7.1 hours per week to 62.1 hours per week at the highest, an extremely high number, and quite possibly a little bit exaggerated. Interestingly, the three highest numbers were all reported by girls. Two girls reported a total of 52.0 hours per week, while one girl reported 62.1 hours per week. In comparison, the highest reported number from the boys was 47.0 hours per week, while two boys reported numbers such as 46.4 and 46.9 hours per week. Although the girls reported the highest numbers regarding time spent on EE, findings showed that the boys spent slightly more time on EE in general (M=26.9) hours per week as opposed to (M=24.2) hours per week for the girls.

Table 1 shows the EE activities that were reported in the language diary in order of popularity. The descriptive statistics are shown by mean and SD.

Extramural English activity (N= 45)	**Mean (hours per week)**	**SD**
Playing digital games	7.6	8.1
TikTok	3.8	5.9
Watching TV series, films and videos online	3.2	4.8
YouTube	2.3	4.2
Music/ Audiobooks	1.0	4.8
Other (speaking with other people)	0.0	2.3
Singing	0.0	2.2
Using the internet	0.0	1.0
Reading books	0.0	0.7
Reading newspapers/ magazines	0.0	0.01
Total all EE activities	25.1	12.9

Table 1: Descriptive statistics of the EE activities, shown by popularity.

After a thorough analysis of each participant's involvement in EE, the language diaries revealed that playing digital games was the most popular activity, with a total weekly mean time of 7.6 hours per week. As shown in Table 1, the social media for short videos (TikTok)

was the second most popular activity, followed by watching (TV series, films, and videos online), YouTube, and listening to music/audiobooks. It was not reported a lot of time on the other EE activities listed in the language diary.

4.3.1 Gender differences top 5 EE activities

During the analyses of the diary data, some gender-related differences were discovered. Although when it comes to the overall time spent on EE activities the gender differences were not very different. However, after a close analysis of the five most popular EE activities, two considerable gender-related differences were revealed. These will now be addressed.

Table 2 shows the gender differences between boys and girls based on the amount of time spent on the five most popular EE activities in the language diary.

Extramural English activity	Boys (N=22) Mean (hours per week)	Boys (N=22) SD	Girls (N=23) Mean (hours per week)	Girls (N=23) SD
Playing digital games	9.6	8.3	1.4	6.0
TikTok	1.7	2.2	6.3	6.9
Watching TV series, films, and videos online	3.0	5.7	4.0	3.9
YouTube	3.8	4.1	1.3	3.9
Music/Audiobooks	0.6	0.8	2.0	6.3

Table 2: Descriptive statistics based on the amount of time spent on the five most popular EE activities revealed by gender.

The activity that revealed the most considerable gender differences was playing digital games. The boys spent considerably more time on digital games, in comparison to the girls, with a weekly mean of (M= 9.6) hours per week as opposed to (M= 1.4) hours per week for the girls. In this case, the gender-related differences were quite large. Additionally, for this activity, the individual variations for the girls were much higher than the total mean (M= 1.4, SD= 6.0). This is explained by the fact that the majority of the girls spent very little time on digital games. However, there were five outliers in this group who all spent a considerable amount of time on digital games, and they also performed well on the vocabulary test.

In contrast, the findings in the language diary showed that the girls spent most of their time on the social media TikTok. The girls spent considerably more time on this EE activity, namely (M= 6.3) hours per week, in comparison to the boys, who spent (M= 1.7) hours per week.

When it comes to the amount of time spent watching TV series, films, and videos online there were no considerable gender-related differences compared to the two activities mentioned above. Table 2 shows that the girls spent a little more time on this EE activity than the boys, (M= 4.0) hours per week as opposed to (M= 3.0) hours per week respectively.

The findings regarding YouTube showed that the boys spent more time on this activity than the girls, while the girls spent more time listening to music and audiobooks.

In conclusion, the findings shown in Table 2 indicated quite considerable gender-related differences between playing digital games and TikTok.

4.4 Vocabulary test

A total number of 45 pupils answered the vocabulary test. The total number of points one could score on the vocabulary test was 24 points. Out of the 45 participants who participated in the vocabulary test, only two pupils scored a maximum of 24 points, while a number of four participants scored 23 points. Interestingly, only six out of 45 pupils scored less than ten points on the vocabulary test. Furthermore, 15 pupils scored 20 points or more on the test. In sum, the overall result was pretty high, as a total number of 32 participants scored higher than 15 points. The total mean score on the vocabulary test was (M= 17.5) points, with an individual variation of (SD= 5.3) points.

Figure 17 shows the total mean score on the vocabulary test, revealed by gender.

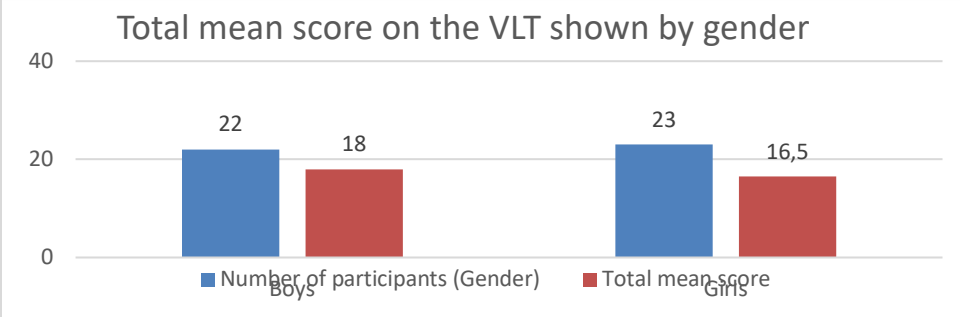


Figure 17: Total mean score on the VLT test shown by gender.

Twenty-two boys and 23 girls participated in the vocabulary test. Figure 19 reveals that the boys performed (M= 18, SD= 4.9) slightly better than the girls (M= 16.5, SD= 5.6) on the vocabulary test. In total 15 pupils scored 20 or more points on the vocabulary test, more specifically nine boys and six girls. One girl and one boy scored a maximum of 24 points on the vocabulary test.

The total number of points one could score on this Part (A) of the vocabulary test was a total of 9 points. The analysis of the results showed that the total mean score on Part (A), the Production (2000-word level) part of the vocabulary test, was (M=5.0) points. These findings

indicate that the 45 participants, on average, managed to correctly answer just above half of the tasks in Part (A).

Figure 18 shows the total mean score on Part (A) of the vocabulary test shown by gender.

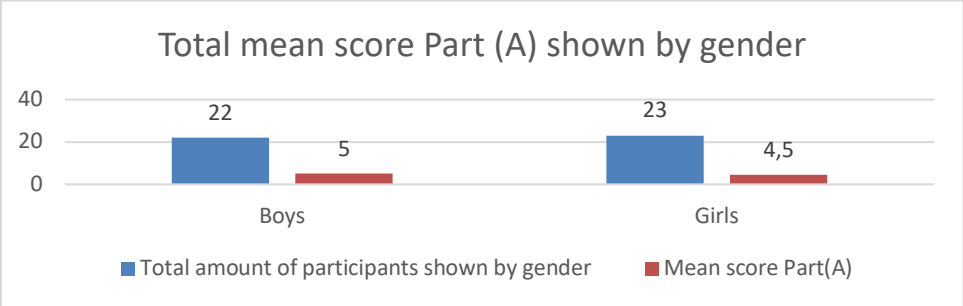


Figure 18: Mean score on Part (A), the Production (2000-word level) revealed by gender.

Figure 18 reveals that the boys scored slightly higher (5.0 points) on Part (A), compared to the girls (4.5). However, the differences were minimal. Moreover, the individual variations for the boys were slightly lower (SD=1.9) than the individual variations for the girls (SD= 2.3), which means that the scores among the girls varied a little more from the mean, compared to the boys. Overall, the total mean scores indicated that the boys scored slightly higher than the girls. In total, only two participants scored a maximum of 9 points on this part of the vocabulary test, one boy and one girl.

Regarding Part (B), the Recognition (2000-word level) part of the vocabulary test, it was possible to score a total of 15 points on Part (B). The analysis of the results revealed that the total mean score on Part (B) was (M=13.0) points. In general, an interesting observation was that the participants scored higher on this part of the test, in comparison to Part (A). Moreover, another interesting finding was that pupils who scored low on Part (A), achieved better results on Part (B). In Part (B), 11 participants scored a maximum of 15 points. This was in considerable contrast to Part (A), as only two pupils scored a maximum of nine points on Part (A). In sum, the results indicated that on average, the participants managed to answer well above half of the tasks in Part (B).

Figure 19 shows the total mean score on Part (B) shown by gender.

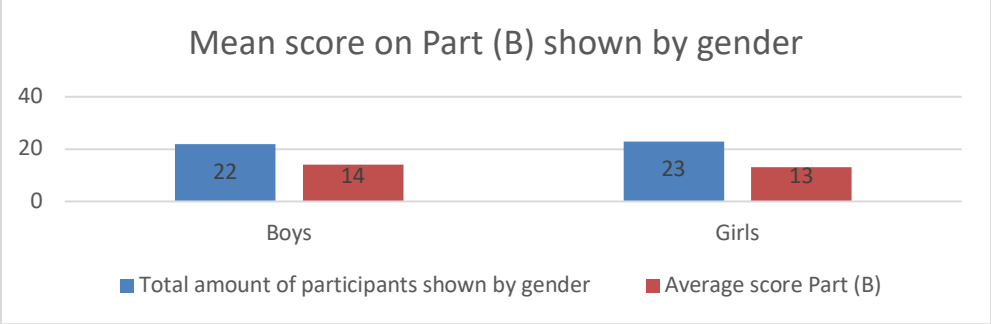


Figure 19: Mean score on Part (B), the Recognition (2000-word level) part of the test, shown by gender.

Figure 19 shows that the boys (M=14, SD=3.5) scored slightly higher on Part (B), compared to the girls (M=13, SD=3.9). In addition to Part (A), the results showed that the boys scored slightly higher than the girls on Part (B). Eleven participants scored a maximum of 15 points, including seven boys and four girls. Additionally, 17 participants scored between 13-14 points on Part (B), this included eight boys and nine girls. Six participants gained a score of 5 or below.

In conclusion, a comparison of the scores for the boys and the girls showed that the boys (M=18, SD=4.9) outperformed the girls (M=16.5, SD=5.6) on both parts of the vocabulary test, and thus the test as a whole.

4.5 Comparison of datasets

4.5.1 The scores on the vocabulary test compared to EE exposure

The aim of this sub-section is an attempt to see whether or not there may be a relationship between the amount of time spent on EE and the pupils' English vocabulary proficiency. When examining the findings in the language diary, the researcher found it convenient to split the participants into three groups, to see whether the amount of time spent on EE activities may have influenced the scores on the vocabulary test, or not. This was quite similar to what Sundqvist and Sylvén (2012) did in their research study. The participants fell into three different EE-groups based on frequencies regarding time spent on EE. Group 1 consisted of 9 participants who spent between 5-15 hours per week on EE activities. This group is referred to as the "Low-frequency" group. Group 2 included 13 participants who spent between 15-25 hours per week on EE activities. This group is referred to as the "Moderate group". Finally, the participants who spent a more extreme amount of time on EE, namely 25 hours per week or more, fell into the third group. This group was referred to as the "Frequent group". This was also the largest group, consisting of 23 pupils.

Table 3 shows descriptive statistics on the three different groups based on the amount of time spent on EE. The statistics are shown by (N=number of participants), time spent on EE, mean, and SD.

Group	**N**	**Time Spent on EE**	**Mean (hours per week)**	**SD**

1.Low-frequency group	9	5-15 hours per week	12.5	2.6
2. Moderate group	13	15-25 hours per week	18.0	2.9
3. Frequent group	23	25+ hours per week	31.4	10.3
Total	45		25.1	12.9

Table 3: Descriptive statistics for the three EE-groups based on the reports from the language diary.

As Table 3 shows, Group 1, the "Low-frequency" group spent a total of (M=12.5) hours per week on EE activities. In addition, this was also the group with the lowest individual variations (SD=2.6). Group 2 spent a total of (M=18.0) hours per week. Finally, Group 3, the "Frequent group" spent a total of (M=31.4) hours per week on EE activities. Moreover, this group had the largest individual variations (SD=10.3), which means that the time spent on EE was widely spread, some pupils reported numbers below the mean, while others reported numbers that were considerably higher than the mean.

In sum, one can see that the amount of time spent on EE varied greatly. It should also be noted that even though Group 2 was referred to as the "Moderate" group, a total of (M=18.0) hours per week on EE is a really large amount of time spent on EE, while the "Frequent" group shows a more extreme amount of time spent on EE

Table 4 shows the gender distribution in the three EE-groups, based on the amount of time spent on EE. In total, the research study consisted of 22 boys and 23 girls.

Group	**Boys** **N**	**Girls** **N**	**Total** **N**
1. Low-frequency group	4	5	9
2. Moderate group	7	6	13
3. Frequent group	12	11	23
Total	22	23	45

Table 4: Gender distribution in the three EE-groups

As revealed in Table 4, the gender distribution was quite evenly distributed. As a way to analyze whether the amount of time spent on EE seems to relate to the pupils' total score on the vocabulary test or not, the scores within the three groups above were analyzed.

Table 5 gives descriptive statistics for the three groups, based on the amount of time spent on EE and their scores on the vocabulary test.

Group **Total N** **(boys+girls)**	**Total score vocabulary test** **Max 24 points**

1.Low-frequency group **N=9** **(4+5)**	Mean 9.0 SD 4.3
2. Moderate group **N=13** **(7+6)**	Mean 18.0 SD 3.5
3. Frequent group **N=23** **(12+11)**	Mean 20.0 SD. 4.9
Total **N=45** **(22+23)**	Mean 17.5 SD. 5.3

Table 5: The total scores on the vocabulary test compared to the amount of time spent on EE.

As demonstrated in Table 5, the total score on the vocabulary test increased with each of the groups. This means that the "Frequent group" who spent more than 25 hours per week on EE activities had a higher total mean score (M=20.0) than the "Moderate" group, who in turn had a twice as high score (M=18.0) compared to the "Low-frequency" group (M=9.0). The most considerable result was the difference between the first and second groups. When looking at the "Frequent" group in comparison to the "Moderate" group there was a slight difference between the two groups. In sum, the difference between the two groups was minor (M=2.0), which may have occurred because both groups spent a considerable amount of time on EE.

4.5.2 The relationship between the types of EE activities and the scores on the vocabulary test

As a way to help the researcher get a clearer picture of the findings, it was necessary to analyze whether or not the total amount of time spent on certain EE activities may have been more beneficial for the score on the vocabulary test than others. Table 4 shows that within the three groups that were based on the amount of time spent on EE, the gender distribution was quite even. However, the findings in Table 2 regarding gender differences within the five most frequent EE activities showed that the boys spent more time playing digital games, in comparison to the girls, who in turn spent more time on TikTok compared to the boys. The researcher found it therefore necessary to investigate certain types of EE activities to see if the total amount of time spent on some activities influenced their score on the vocabulary test more than others.

4.5.2.1 Playing digital games

The participants were again divided into three different groups, namely gaming-groups, that were based on the amount of time they spent on this activity. Group 1 is referred to as the "Low frequency" group who spent between 0-5 hours per week on digital games. This was also the largest group and consisted of 20 pupils. Group 2 is referred to as the "Moderate" group. This group consisted of 11 participants and spent between 5-10 hours per week on digital games. Lastly, the third group, referred to as the "Frequent" group, spent 10 hours or more per week on digital games and it included 14 participants. Table 6 shows descriptive statistics on the three different groups based on the amount of time spent on digital games. The statistics are shown by (N=number of participants), time spent on digital games, mean, and SD.

Group	**N**	**Time spent on digital games**	**Mean (hours per week)**	**SD**
1.Low frequency	N=20	0-5 hours per week	1.0	1.5
2.Moderate	N=11	5-10 hours per week	8.8	1.3
3.Frequent	N=14	10+ hours per week	14.0	7.7
Total	N=45		7.6	8.1

Table 6: Descriptive statistics on the amount of time spent on playing digital games, shown by three different gaming-groups.

Table 6 shows that Group 1 spent a total mean of (M=1.0) hours per week playing digital games, while Group 2 had a total mean score of (M= 8.8) hours per week. The common trend was relatively low individual variations for Group 1 (SD=1.5) and Group 2 (SD=1.3). In comparison, Group 3 spent a total mean of (M= 14.0) hours per week. Additionally, Group 3 had larger individual variations (SD=7.7) compared to the other two groups. In this group, the amount of time spent on digital games varied greatly from the mean for this group, where some pupils reported numbers way higher than the mean score for this group.

Table 7 shows the gender distribution in the three gaming-groups.

Group	**Boys** **N**	**Girls** **N**	**Total** **N**
1.Low frequency	3	17	20
2.Moderate	10	1	11
3.Frequent	9	5	14
Total	22	23	45

Table 7: Gender distribution in the three gaming-groups.

As one can see in Table 7, gender differences were found for playing digital games. The "Low frequency" group, who spent little time playing digital games, consisted mainly of girls,

as 17 girls belonged to this group as opposed to three boys. The "Moderate" group who spent between 5-10 hours per week playing digital games mainly consisted of boys, namely ten, whereas there was only one girl in this group. Lastly, the "Frequent" group consisted of nine boys and five girls. In sum, one can see that for this activity the gender differences were quite evident. The majority of the boys spent 5 hours per week or more on this activity, while the majority of the girls spent less than 5 hours per week on this activity.

Table 8 shows the total scores on the vocabulary test for the three gaming-groups compared to the amount of time spent on playing digital games.

Group **Total N** **(girls+ boys)**	**Total score vocabulary test** **Max 24 points**
1. Low frequency **N=20** **(17 + 3)**	Mean 15 SD 5.4
2. Moderate **N=11** **(1+ 10)**	Mean 17.5 SD 6.0
3. Frequent **N=14** **(5 +9)**	Mean 19.5 SD 2.4
Total **N=45** **(23+22)**	Mean 17.5 SD 5.3

Table 8: The total scores on the vocabulary test compared to the amount of time spent on playing digital games.

Table 8 shows that the total score on the vocabulary test improved with each group. This means that the "Frequent" group had a higher total mean score (M=19.5) than the "Moderate" group (M=17.5). The moderate group had a higher total mean score (M=17.5) than the "Low frequency" group (M= 15). Among the "Frequent" gamers in Group 3, the individual variations (SD=2.4) were lower compared to the individual variations in Group 1 (SD=5.4) and Group 2 (SD=6.0). This means that the total scores differed less from the mean score for this group in comparison to Group 1 and Group 2. In sum, based on these observations the amount of time spent on this EE activity may have been beneficial for the participants' vocabulary scores since the scores improved with the amount of time spent on this activity.

4.5.2.2 TikTok

The participants were divided into three TikTok-groups based on the amount of time spent on TikTok. The groups are referred to as the "Low frequency" group, the "Moderate" group, and the "Frequent" group. Table 9 shows descriptive statistics on the three different groups based

on the amount of time spent on TikTok. The statistics are shown by (N=number of participants), time spent on TikTok, mean, and SD.

Group	N	Time spent on TikTok	Mean (hours per week)	SD
1.Low frequency	N= 28	0-5 hours per week	1.3	1.8
2.Moderate	N=11	5-10 hours per week	6.6	1.1
3.Frequent	N=6	10+ hours per week	16.8	5.6
Total	N=45		3.8	5.9

Table 9: Descriptive statistics on the amount of time spent on TikTok, shown by three different TikTok-groups.

Table 9 shows that the "Frequent" group spent a total mean of (M= 16.8) hours per week on TikTok, with individual variations of (SD=5.6). Group 2 spent a total mean of (M= 6.6) hours per week on TikTok, while Group 1 spent a total mean of (M=1.3) hours per week. The "Moderate" group had the lowest individual variations (SD=1.1), while the "Frequent" group had the largest individual variations (SD=5.6) which mean that the reported hours spent on TikTok varied more from the mean for this group, compared to the other two TikTok-groups.

Table 10 shows the gender distribution in the three TikTok-groups.

Group	Boys N	Girls N	Total N
1.Low frequency	20	8	28
2.Moderate	2	9	11
3.Frequent	0	6	6
Total	22	23	45

Table 10: Gender distribution in the three TikTok-groups.

As Table 10 illustrates, the gender differences were quite considerable for this EE activity. The "Low frequency" group consisted mainly of boys (N=20) as opposed to girls (N=8). The "Moderate" group consisted of nine girls and two boys, while the "Frequent" group can be described as the "girl-group". The number of participants who spent more than 10 hours on TikTok was six, all of which were girls. The boys did not seem to spend much time on this activity. The majority of the girls spent 5 or more hours per week on TikTok.

Table 11 shows the total scores on the vocabulary test for the three groups compared to the amount of time spent on TikTok.

Group **Total N** **(girls+ boys)**	**Total score vocabulary test** **Max 24 points**
1.Low frequency **N=28** **(8 + 20)**	Mean 18.0 SD 5.15
2.Moderate **N=11** **(9+ 2)**	Mean 16.5 SD 6.0
3.Frequent **N=6** **(6 girls)**	Mean 17.0 SD 5.0
Total **N=45** **(23+22)**	Mean 17.5 SD 5.3

Table 11: The total scores on the vocabulary test compared to the amount of time spent on TikTok.

Interestingly, the findings in Table 11, showed that the "Low frequency" group, who spent the least time on TikTok, outperformed the two other groups with a total mean score of (M=18.0) points, compared to the "Moderate group" (M=16.5) and the "Frequent" group (M=17.0).

4.5.2.3 Watching TV series, films, and videos

To give an overall impression of the total amount spent on this activity, the participants were divided into three (TV, film, and video) groups, based on how much time they spent on watching TV series, films, and videos. The groups are referred to as the "Low frequency" group, the "Moderate" group, and the "Frequent" group. Table 12 shows descriptive statistics on the three different groups based on the amount of time spent on watching TV series, films, and videos. The statistics are shown by (N=number of participants), time spent on watching TV series, films and videos, mean, and SD.

Group	**N**	**Time spent on (TV series, films, and videos)**	**Mean (hours per week)**	**SD**
1.Low frequency	N=26	0-5 hours per week	1.3	1.5
2.Moderate	N=12	5-10 hours per week	6.6	1.4
3.Frequent	N=7	10+ hours per week	12.0	3.5
Total	N=45		3.2	4.8

Table 12: Descriptive Statistics on the amount of time spent on watching TV series, films, and videos, shown by three different groups.

Table 12 reveals that the largest group was the “Low frequency” group, consisting of 26 participants. This group spent a total mean of (M=1.3) hours per week on this activity. The “Moderate” group spent a total mean of (M=6.6) hours per week, while the “Frequent” group spent (M=12.0) hours per week on this activity.

Table 13 describes the gender distribution in the three (TV, film, and video) groups.

Group	**Boys** **N**	**Girls** **N**	**Total** **N**
1.Low frequency	12	14	26
2.Moderate	6	6	12
3.Frequent	4	3	7
Total	22	23	45

Table 13: Gender distribution in the three (TV, film, and video) groups.

As illustrated in Table 13, no gender differences were discovered for this activity. Instead, it was revealed that the gender distribution for this activity was quite even.

The total scores on the vocabulary test for the three groups, compared to the amount of time spent watching TV series, films, and videos are shown in Table 14.

Group **Total N** **(girls+ boys)**	**Total score vocabulary test** **Max 24 points**
1.Low frequency **N=26** **(14 + 12)**	Mean 16.3 SD 5.3
2.Moderate **N=12** **(6+ 6)**	Mean 21.0 SD 5.0
3.Frequent **N=7** **(3+4)**	Mean 20.0 SD 3.8
Total **N=45** **(23+22)**	Mean 17.5 SD 5.3

Table 14: The total scores on the vocabulary test compared to the amount of time spent on watching TV series, films, and videos.

As one can see in Table 14, the “Moderate” group scored the highest total mean (M=21.0) on the vocabulary test, which was slightly higher than the mean score in the “Frequent” group (M=20.0). However, the differences were not very different and both groups scored high on the vocabulary test. Moreover, a finding during the analysis of the “Moderate” group in the language diaries showed that this group also spent a lot of time playing digital games. The “Low-frequency” group, who spent less time on this activity scored a total mean of (M=16.3)

points. In sum, the findings in Table 14 showed that the participants who spent more than 5 hours per week watching TV series, films, and videos performed well on the vocabulary test.

Based on the analysis of the three most frequent EE activities that were reported in the language diary and on the comparison of these findings with the results on the vocabulary tests, the overall results indicate that the amount of time spent on certain activities could be more beneficial than others for their L2 vocabulary proficiency. It should also be noted that there are some activities that are not as thoroughly analyzed as the three in Sub-sections 4.5.2.1, 4.5.2.2, and 4.5.2.3. However, the participants spent considerably more time on playing digital games, TikTok, and watching TV series, films, and videos, compared to the rest of the activities reported in the language diary, and therefore these activities were prioritized.

4.6 The pupils' attitudes and beliefs compared to their scores on the vocabulary test

4.6.1 Pupils' attitudes towards English in comparison to their scores on the vocabulary test

Sub-section 4.6.1 compares the pupils' attitudes towards the English subject reported in the questionnaire, and their scores on the vocabulary test. This sub-section attempts to examine whether or not the pupils' results on the vocabulary test may relate to their attitudes towards English.

Having analyzed the pupils' questionnaire responses, one could see that the pupils' answers fell into three categories, based on to what extent they liked English. Therefore, the following results are divided into the following three groups: Group 1 is referred to as "I like English a little bit", Group 2 is referred to as "I like English" and lastly, Group 3 is referred to as "I like English very much". Group 1 was the smallest and included five pupils, while Group 2 included 15 pupils. The largest group was Group 3, which consisted of 25 pupils.

Table 15 provides descriptive statistics of the groups and their scores on the vocabulary test.

Group **Total N** **(girls+ boys)**	**Total score vocabulary test** **Max 24 points**
1.I like English a little bit **N=5** **(4+ 1)**	Mean 8.0 SD 4.9
2.I like English **N=15** **(7+ 8)**	Mean 16.0 SD 5.5

3.I like English very much **N=25** **(11+14)**	Mean 19.0 SD 4.5
Total **N=45** **(23+22)**	Mean 17.5 SD 5.3

Table 15: The total scores on the vocabulary test compared to the pupils' attitude towards English.

Table 15 reveals that the pupils' scores improved with each group. Group 3 had a higher total mean score (M=19.0) than Group 2 (M=16.0) while Group 2 had a twice as high total mean score in comparison to Group 1 (M= 8.0). Overall, Table 14 shows quite considerable differences between the three groups.

4.6.2 The pupils' beliefs about their vocabulary in comparison to their scores on the vocabulary test

This sub-section compares the pupils' beliefs about their vocabulary to their score on the vocabulary test. The aim is to see whether the pupils' beliefs could relate to their total scores on the vocabulary test.

Based on the analysis of the findings in the questionnaires, the answers fell into five groups which were referred to as different levels. The five groups are as follows: Levels 4-5 "partly satisfied", Level 6 "satisfied", Levels 7-8 "more than satisfied", Levels 9-10 "very satisfied" and Level 11 "extremely satisfied". Level 11 was the smallest group and included only three pupils compared to Levels 7-8, which was the largest group and included a total of 17 pupils.

Table 16 provides descriptive statistics of the groups and their score on the vocabulary test.

Group **Total N** **(girls+boys)**	**Total score VLT** **Max 24 points**
1.Levels 4-5 **N=8** **(6+2)**	Mean 12.5 SD 4.8
2.Level 6 **N=7** **(5+2)**	Mean 17.5 SD 4.7
3.Levels 7-8 **N=17** **(5+12)**	Mean 19.0 SD 2.5
4.Levels 9-10 **N=10** **5+5**	Mean 20.0 SD 5.3
5.Level 11	Mean 23.0

N=3 **(3 girls)**	SD. 6.4

Table 16: The total scores on the vocabulary test, compared to the pupils' beliefs about their vocabulary.

As one can see in Table 16, the pupils' scores increased with each group. Group 5 had a higher total mean score (M=23.0) compared to Group 4, who in turn had a higher score (M=20.0) than Group 3 (M=19.0). Group 2 scored higher (M=17.5) than Group 1 (M=12.5). However, the individual variations were quite large in all of the groups, except from Group 3. This was interesting as this was the largest group, but with the lowest individual variations (SD=2.5), while Group 5 had the highest individual variations (SD=6.4), this is explained by the fact that two of the girls in that group gained a really high number of points on the vocabulary test, in contrast, the remaining pupil in that group scored considerably lower and may have overestimated her vocabulary proficiency.

5.Discussion

5.1 Introduction

This chapter discusses the results collected from the pupil questionnaire, the language diary, and the vocabulary test and relates them to the theoretical framework and previous research presented in Chapter two. The research questions to be answered in this chapter are as follows:

1. Which EE activities are the most frequent among Norwegian sixth graders?
2. In what way do the sixth graders believe they learn English the best?
3. To what extent can sixth graders' attitudes towards English and their beliefs relate to their English vocabulary proficiency?
4. Is there any relationship between the amount of time spent on EE activities and the pupils' English vocabulary proficiency? If any, is it positive or negative?

Section 5.2 discusses the findings concerning the most frequent EE activities among the sixth graders. Section 5.3 is a discussion of the pupils' own learner beliefs regarding how they learn English best. Section 5.4 discusses whether the pupils' positive attitudes to the TL and their beliefs relate to their scores on the vocabulary test. Lastly, Section 5.5 attempts to argue whether there may exist a relationship between the pupils' total amount of time spent on EE and English vocabulary proficiency.

5.2 The most frequent types of EE activities

The first research question being discussed concerns which EE activities were the most frequent among the 45 Norwegian sixth graders. To obtain the necessary data to answer this question, the participants were asked to fill in a questionnaire and a language diary. The pupil questionnaire was divided into 5 sections, where Section 4 in the questionnaire reflected the pupils' EE exposure and EE habits. This section revealed that 58% of the pupils, making it a total of 26 pupils, agreed or agreed very much to the statement that they learned most of their English outside of school. These findings were similar to the findings in Jakobsson's (2018) study, where 65% of the 10th graders in his study reported that they learned most or all of their English outside of school. Although the findings in Jakobsson's (2018) study were collected from older learners in the Norwegian context, Jakobsson's (2018) findings concerning learner beliefs about the influence of EE support the findings in the present thesis. In addition to

Jakobsson (2018), Dahl (2019) reported that the majority of the Norwegian lower secondary students in his study believed their oral skills were mostly developed through EE exposure, while Reda (2019) also reported that the Norwegian upper secondary students agreed on the multiple benefits of EE in his study. Overall, it seems to be an agreement among Norwegian EFL learners about EE and its benefits, both among older and younger learners (Jakobsson, 2018; Dahl, 2019; Reda, 2019).

5.2.1 The activities

The questionnaire served the purpose of providing an overall picture of the types of EE activities the pupils usually engaged in, in their spare time. The results showed that the majority of the pupils believed they spent time on activities such as listening to music, watching films and TV series, YouTube, surfing the internet, and playing digital games, while 22 out of 45 pupils answered that they read books. In addition to these, some other activities were TikTok, Singing, Discord, and talking with other people in English. The activities TikTok and singing were also both listed in the language diary.

The findings in the pupil questionnaires were supported to a larger degree by the findings in the language diary. Moreover, in contrast to the questionnaire, the language diary measured in more detail how frequently the pupils did the various activities. As a result, it enabled the researcher to see which of the EE activities were the most frequent among the sixth graders in this study. Based on the findings reported in the language diary, five EE activities were the most frequent among the Norwegian sixth graders. The following top five activities are presented from 1 to 5: (1) Playing digital games, (2) TikTok, (3) Watching TV series, films, and videos, (4) YouTube, and (5) listening to Music/Audiobooks. In contrast, the pupils' amount of reading showed worrying reports, as this was the least popular activity reported in this study.

The language diary showed that the same types of activities that were reported in the questionnaire were also reported in the language diary, although the time spent on these activities varied greatly. Overall, the language diary revealed that the pupils spent a total of (M=25.1) hours per week on EE. In comparison to other research in the field, this amount was a little higher compared to (Sundqvist, 2009, Sundqvist & Sylvén, 2012). As suggested by Sundqvist and Sylvén (2012), this could be explained by the fact that the language diaries relied on self-report, so one would have to assume that some of the pupils, for instance, could have forgotten to fill out the diary one day, and as consequence estimates could have been.

On one hand, it is hard to say something conclusive about why these activities were the most frequent among the sixth graders, compared to other activities that were reported in the language diary. However, the pupils probably viewed these types of activities as more amusing, compared to the other activities. Moreover, it is fair to believe that motivation was a prominent factor for the pupils' engagement in this activity, as the reports showed that they spent a considerable amount of time on these activities, which may indicate that the pupils found these activities way more fun than the rest of the EE activities.

On the other hand, the reason why reading turned out as the least popular EE activity, may be because of its connections towards schooling, which may cause a decrease in the pupils' motivation, as the findings in the study showed that the pupils preferred EE activities with fewer connections to an educational context.

Additionally, Sundqvist (2009) has previously concluded that self-efficacy may determine one's involvement in EE. This may, for instance, explain why so many of the pupils reported many hours on playing digital games as this probably was an activity they believed they mastered and consequently it increased their motivation.

5.3 The pupils' perceptions of how they learn English

It is commonly known that learner beliefs are important for any type of learning to occur. Positive learner beliefs towards what is being learned will enhance motivation, which could in turn affect the learner's success (Dörnyei, 2005). The questionnaire also served the purpose of providing the researcher with qualitative data about the pupils' beliefs about how they learned English the best. According to Lightbown and Spada (2006), all learners have certain beliefs regarding learning. Learner beliefs are by Lightbown and Spada defined as:

Beliefs which are based on previous learning experiences and the assumption that a particular type of learning (right or wrong) is the best one for them to learn (Lightbown & Spada,2006, p.91).

This seemed to be the case for the participants in this research study as well, as each of the participants wrote longer sentences where they explained which activities they viewed as the most beneficial for English learning. In the questionnaire, none of the pupils stated that they simply did not have any preferences about how they learned English the best. All of the pupils had their own learner beliefs about this.

The most considerable finding was that the majority of the pupils, a total number of 30 pupils seemed to agree in the effect watching TV series, films, and videos online had on English learning. Additionally, the language diary revealed that 37 pupils spent time on this activity daily. Many of the pupils expressed that engaging in this activity helped them learn new words and how to write them because they tended to watch with English subtitles. This is well in line with research on vocabulary acquisition, which suggests that incidental learning through TV series and films is beneficial due to a large amount of input and repeated encounters with low-frequency words (Nation & Webb, 2017).

Furthermore, some pupils wrote that by watching TV and films they learned how to use different words in a variety of situations, and they argued that by listening to and viewing other people speak the TL they improved pronunciation. It is commonly known that audio-visuals such as TV, films, and videos are likely to provide authentic language used in real-life situations and this exposes the learners to various accents, which in some cases could influence the learners' pronunciation. Lastly, the pupils seemed to agree that this was a more fun and motivating way of experiencing English. This is in line with research on individual differences and L2 acquisition, which suggests that motivation is an influential factor for success in L2 acquisition (Krashen, 1982; Sundqvist, 2009; Dörnyei, 1990, 2005; Lightbown & Spada, 2006). For instance, motivation is seen as a prominent factor for successful L2 acquisition in Krashen's (1982) affective filter hypothesis. This would for instance mean that if the pupils have low motivation towards the TL, this affective variable will probably prevent the input from reaching the part of the brain responsible for L2 acquisition. In addition, it is commonly known that if you are not motivated to learn something, you will probably not become very good at it, and in this case that could affect successful L2 acquisition. Overall, the pupils' positive attitudes towards English were expressed to a further extent in the questionnaire, where 37 out of the 45 pupils answered that English was fun.

According to 15 pupils, playing digital games was an important activity for English learning. Moreover, based on the reports from the language diary, 39 out of the 45 participants reported spending time on gaming. A growing body of research has shown positive findings regarding the potential learning outcome one could get by engaging in digital games. Most games provide a mixture of both written and spoken input to the TL, which has clear advantages in terms of exposure to the TL input. Moreover, a relatively large vocabulary is an advantage in many games, since some games demand comprehensible reading to complete different tasks in the game. The pupils in this study argued that the game instructions forced them to use their English knowledge and to understand what the various

tasks asked them to do. In some cases, the input in the games could be beyond the learner's current level, which, according to Krashen's (1982) input hypothesis, is necessary for the learner to make progress in the TL.

In addition, the pupils argued that they often spoke English with other players, either through spoken output or through a chat. These types of interactions are in line with Long's (1981) interactionist approach, which claims that interaction is a key element for L2 acquisition, along with the importance of negotiation meaning which is necessary to make the input comprehensible (Long, 1981, 1987; Gass & Selinker, 2008). In cases where the pupils communicate with other players, they often have to negotiate meaning, and in such situations, they could meet more people who are better or worse in the TL. Both parts can benefit from this as they have to communicate and help each other to succeed in the game, which is also quite similar to Vygotsky's (1978) zone of proximal development. This refers to what the learners can do alone, the development that has already occurred, and with help from people who are better equipped than the learner. In other words, a more capable peer can help the learner back on track if the problem-solving process breaks down. For instance, if something is about the be acquired within the learner, some guidance could help this acquirement to fully blossom, and as a result, the learner might be able of solving the problem. This is yet again quite similar to Krashen's (1982, 2013) input hypothesis which emphasizes that one acquires language when one understands messages that contain language that one has not yet acquired, but one is ready to acquire (Krashen,1982, 2013). This type of situation could possibly provide the learner with the needed input and as a result, new words could be acquired.

Several pupils wrote that speaking English with other people, such as family and friends, helped them learn English. However, very few pupils reported that they spent a considerable amount of time on this activity in their language diary. This may be explained by the assumption that they believed that this was important, but it was not something they did regularly.

Although most of the participants mainly considered EE activities to be the most favourable and important activities for them to learn English, some of the participants argued that traditional schooling was still an important arena for them to learn English. Especially, oral group projects such as Readers Theatre and oral presentations were activities that the pupils viewed as beneficial for learning English. The pupils emphasized this by arguing that such activities helped them practice their spoken English since it enabled them to interact and help each other with difficult words that needed an explanation. The negotiation for meaning is therefore important in such activities. In sum, group projects are activities with the potential

of providing the learners with both input to the TL and output through the production of speech. Lastly, the negotiation for meaning is also typical in such activities. Overall, the pupils' statements are supported by the interactionist approach (Long, 1981,1987; Gass & Selinker, 2008).

5.4 Learners' attitudes and beliefs

The participants' attitudes towards English were in general very positive. Based on the questionnaire data, not a single participant answered that he/she did not like English at all. Their attitudes varied from "I like English a little", "I like English" and "I like English very much". In one of the open-ended questions in the questionnaire, most of the participants wrote that English was important because they would need it in the future. In other words, the instrumental motivation seemed to be strong among the pupils, which is in line with Dörnyei's (1990) claim that instrumental motivation tends to be more significant than integrative motivation in the EFL classroom.

Furthermore, the pupils' attitudes and beliefs were compared to the results on the vocabulary test. The results were analyzed by dividing the participants into groups based on how well they did like English and how satisfied they were with their L2 vocabulary.

A lot of research on individual learner differences suggests that it may affect the success of the learners' L2 acquisition (Sundqvist, 2009; Dörnyei, 2005; Krashen, 1982). The pupils' positive attitudes towards English may relate to their English vocabulary proficiency. The results showed that the pupils who liked English the least scored considerably lower than the participants who liked English or liked English very much. Furthermore, the test scores increased with every group (see Table 15), which means that the group of participants who liked English very much had the highest total score on the vocabulary test. Thus, the impression was that a positive attitude enhanced motivation, which yet may have been an influential factor for the pupils' L2 acquisition.

This may be supported to a further extent by Krashen's (1982) affective filter hypothesis, which looks at the importance of motivation, confidence, and low anxiety as prominent factors for successful L2 acquisition. Based on the findings, positivity seemed to be important for the pupils' scores on the vocabulary test, and it may therefore be assumed that their language anxiety was low, since the pupils, in general, were positive towards English. Low anxiety is an important individual factor for successful L2 acquisition, and high anxiety could according to research (Krashen, 1982, Sundqvist, 2009; Lightbown & Spada, 2006) affect L2 acquisition. In this case, the pupils' anxiety did not seem to block their input from being

acquired. The findings regarding the relationship between attitudes and English proficiency may also be supported to a further extent by other research that has addressed the importance of positive attitudes and motivation (Sundqvist, 2009; Lightbown & Spada, 2006; Dörnyei, 1990, 2005; Jakobsson, 2018).

When considering the pupils' beliefs about their vocabulary, the results were quite similar to the findings regarding their attitudes. For each group (see Table 16), the total score on the vocabulary test increased. The pupils who were only "partly satisfied" with their vocabulary scored the lowest, while Group 5, which was "extremely satisfied" scored the highest on the vocabulary test. Research regarding individual factors such as personality traits has indicated that learners with high self-esteem tend to be better suited for language learning (Sundqvist, 2009; Lightbown & Spada, 2006; Rubio, 2007). These indications may seem to be appropriate for the pupils in this study, as the results showed that the better the participants felt their vocabulary knowledge was, the higher they performed on the vocabulary test. This may also be explained further by the fact that pupils with strong self-esteem, tend to be more extroverted, and therefore they dare to take risks and engage in the TL which is a necessity for L2 acquisition. Overall, high confidence and extraversion are according to research more beneficial for L2 acquisition, compared to low self-esteem which could affect learning situations badly (Krashen, 1982; Sundqvist, 2009; Lightbown & Spada, 2006; Rubio, 2007).

In sum, the broader picture showed that positive attitudes and beliefs may be beneficial, as those who were more positive and satisfied with their vocabulary performed better on the vocabulary test in comparison to those who were more negative. Lastly, the findings can be compared to the findings in Jakobsson's (2018) master's thesis, which concluded that one's attitudes and perceived self may affect one's grades one way or another.

5.5 EE exposure and English vocabulary proficiency

The collected data in this study identified a pattern that showed a positive relationship between high EE exposure and the pupils' vocabulary size, as the pupils with a high EE exposure reached a higher total mean score on the vocabulary test, in comparison to the pupils with a lower EE exposure (see Table 5). However, the total score on the vocabulary test did not differ very much between the EE group who spent 15-25 hours per week on EE and the group who reported 25 hours or more on EE per week. This minor difference between Groups 2 and 3 may be explained by the fact that a total of 15-25 hours per week is a high amount of exposure, which seems to have contributed to the pupils' good test results. Nevertheless, the

group that reported the highest amount of exposure to EE performed better than the other groups. This pattern is in line with the findings in Sundqvist's (2009) PhD study, which showed a similar pattern as the present thesis, even though Sundqvist (2009) conducted her study on older language learners, namely Swedish ninth graders.

Previous research on EE has indicated that the types of EE in which the learners engaged in might matter. For instance, in this study, the boys spent a little more time on EE activities in comparison to the girls. Furthermore, the boys performed better than the girls on the vocabulary test. These results have similarities to previous research conducted on EE (Sundqvist, 2009; Sundqvist & Sylvén, 2012). Sundqvist (2009) has previously argued that such differences may be because boys are normally engaged in different EE activities. It was therefore evident to analyse whether certain types of EE activities could have had a larger influence on the pupils' vocabulary than others.

Based on the three most frequent EE activities, the analyses indicated that high exposure to certain types of EE activities may have been more beneficial to the participants than other activities.

Most research on playing digital games has shown great potential for vocabulary acquisition. The reports revealed that a high number of participants spent several hours on digital games, which, according to previous research, has advantages in terms of vocabulary acquisition (Wickström & Sundqvist, 2015; Sundqvist & Sylvén, 2012; Ranalli, 2008; Vahdat & Behbahani, 2013). Moreover, many boys stated in the language diaries that they played a lot of multi-player games. The common pattern for these types of games is that the players often need to communicate and interact with other players to win matches or complete a task. In line with Long (1981, 1987); Gass & Selinker (2008); Sundqvist & Sylvén (2016), the interactionist approach is highly relevant for L2 acquisition as the approach can be connected to EE activities such as playing digital games. As Gass & Selinker (2008) argue: "the interaction approach encompasses learning through input, production of language and feedback that comes as a result of interaction" (Gass & Selinker, 2008, p.317). This is exactly what the pupils are doing when participating in multiplayer games, such as Fortnite. This was a game many pupils reported a lot of time on, where communication between the players is important for staying alive in the game. Additionally, many digital games may provide the learners with both spoken and written input to the TL. Based on the amount of time that was reported on this EE activity, it seems to indicate that playing digital games could have had a positive influence on the participants' English development, especially for the boys since they spent a lot more time on this activity in comparison to the girls. This difference regarding

gender is also well in line with previous research in the field (Wickström & Sundqvist, 2015; Sundqvist, 2009; Sundqvist & Sylvén, 2012, Vahdat & Behbahani, 2013).

The data analyses showed that the test scores on the vocabulary test related to the amount of time spent on playing digital games in the pupils' spare time. This pattern supports the findings in Sundqvist and Sylvén's (2012) study on gaming and vocabulary proficiency, which was conducted on Swedish learners in the age 11 to 12, as in the present study. Furthermore, as mentioned earlier, previous research has shown strong effects between playing digital games and L2 proficiency (Sundqvist, 2009; Sundqvist & Sylvén, 2012; Wickström and Sundqvist, 2015; Ranalli, 2008; Vahdat & Behbahani, 2013). Although most of this research was conducted on older learners and adults, the findings in the present study demonstrated that the scores on the vocabulary test increased for each gaming-group (see Table 8), which was based on the amount of time spent on digital games. Therefore, despite the participants' young age, it may seem that there is a pattern between the frequency of playing digital games and their English vocabulary proficiency.

In terms of gender, the boys spent more time playing digital games in comparison to the girls, who in turn spent most of their time on TikTok, which surprisingly turned out to be the second most popular activity among the sixth graders. Although the findings indicated that the pupils spent a lot of time on the TikTok activity, especially the girls, the researcher remains unsure of the potential influence of this app. By engaging in this activity, the pupils are exposed to millions of videos, and, according to Oxfordhouse (2020), 800 million people are actively using this app monthly. The videos one encounters at TikTok are extremely short, which means that they can last for approximately 60 seconds at the longest. Furthermore, many videos are typically made to be funny and tend to show different dance routines. Not only do the types of videos vary, but also the amount of spoken input in the videos varies greatly. As a consequence of the videos' short length, it would normally lead to a lot of time spent just scrolling through numerous videos and not necessarily paying attention to them. Additionally, in the diaries, several pupils wrote that they watched different dance routines on TikTok. It is therefore difficult to make any certain conclusions about the influence of this activity, but, as Nation and Webb (2017) suggest, it would depend on the amount of spoken input these videos provide the learners with. Thus, the kinds of videos on TikTok would seem to matter.

The analysis showed that the largest group out of the TikTok-groups (see Table 11), namely the "Low-frequency" group (N=28), who spent the least time on TikTok, actually scored the highest on the vocabulary test. In other words, the findings indicated that a high

amount of time spent on TikTok may not be as beneficial as other EE activities. Moreover, in the "Frequent" group, the pupils who scored the highest on the vocabulary test also reported a considerable amount of time playing digital games. Thus, it may be argued that TikTok may not be very beneficial for L2 vocabulary acquisition, in comparison to other EE activities. Lastly, based on the claims of Nation and Webb (2017), films, videos, and TV need to be watched regularly, for the number of unknown words to increase. However, the researcher would argue that the number of unknown words the language learner potentially encounters through TikTok seems to be significantly low.

Watching TV series, films and videos was the third most frequent activity among the participants. In contrast to playing digital games and TikTok, the gender distribution for this activity was quite even. In comparison to the national study on children's experiences with various media, the data showed some similar trends. According to Medietilsynet (2016), it is common for Norwegian children and teenagers at the age of 9-16 to spend two or more hours watching TV series and films daily. Based on the pupils' language diaries, many reported spending two or more hours watching TV series and films during the week. In other words, it would seem that the pupils were regularly exposed to a lot of spoken input through this EE activity. Moreover, research suggests that if EE activities such as watching films and TV are done regularly over time, the number of unknown words the learners encounter will increase continuously, which yet could enhance the learning potential, since these words are encountered repeatedly (Nation & Webb, 2017).

The results on the vocabulary test showed a positive relationship with the amount of time spent on this activity (see Table 14). The largest TV, film, and video-group, namely the "Low-frequency" group (N=26), who spent the least time on this activity (M= 1.3 hours per week), performed less well on the vocabulary test in comparison to the two groups who spent five hours or more per week on this activity. Moreover, the total vocabulary score was high for the two groups who spent a good amount of time on this activity. This may be supported by Nation and Webb's (2017) argument, who claim that a high amount of exposure to spoken input could potentially lead to more or less the same number of encounters with low-frequency words in a written text. Consequently, this will enhance the potential for language learning and vocabulary growth (Webb, 2015; Nation & Webb, 2017).

Overall, the study identified a pattern that seems to indicate that there may exist a positive relationship between high EE exposure and the pupils' English vocabulary proficiency, although it may be argued that the pupils' involvement in certain types of EE activities may be more beneficial than others. In general, research suggests that EE activities which demand

more active engagement from the learner (e.g., reading, playing digital games) are more beneficial than more passive activities (music, film, TV) (Sundqvist,2009). This thesis indicated the positive influence digital games may have on L2 vocabulary acquisition. However, the thesis also showed that more passive EE activities such as watching films, videos, and TV series may be important for the pupils' L2 vocabulary acquisition as long as is the pupils are given enough time. This is well in line with research on incidental vocabulary acquisition (Webb, 2015; Nation & Webb, 2017).

However, it should be noted that the other activities reported in the language diaries were not analyzed in the same depth as the three activities discussed in this section. This was due to the low amount of time reported on these activities. Therefore, it was concluded that these activities did not seem to be as relevant for the participants in this particular study

6.Conclusion

6.1 Main findings and concluding remarks

This thesis was a study of Norwegian sixth graders' extramural English (EE) habits, intending to investigate the possible relationship between the pupils' amount of exposure to extramural English and English vocabulary proficiency. Furthermore, it attempted to shed light on the pupils' most frequent EE activities, as well as their attitudes to and beliefs about English learning.

The thesis was a mixed methods study collecting data through a digital mixed questionnaire, a language diary, and a vocabulary test. In total, 45 Norwegian sixth graders took part in this research study. The study aimed to answer four research questions concerning (1) the most frequent types of EE activities among Norwegian sixth graders, (2) the pupils' perceptions of how they learned English, (3) how the pupils' attitudes and beliefs might relate to their English vocabulary proficiency, and (4) the possible relationship between EE exposure and the pupils' English vocabulary proficiency. The findings were as follows.

As for the first research question, the Norwegian sixth graders' engagement in EE activities seemed to be in line with previous research (Sundqvist, 2009; Jakobsson, 2018; Dahl, 2019; Reda, 2019). One way or another, all of the participants were regularly engaged in EE activities in their spare time, and the findings revealed that the participants in the research study spent roughly 25 hours per week on EE activities. In addition, the sixth graders reported that they spent time on EE activities such as playing digital games, TikTok, watching films, TV series, and videos, YouTube, listening to music/audiobooks, speaking with other people, singing, using the internet, and reading books or newspapers. However, the most frequent EE activities among the sixth graders were playing digital games, TikTok, and watching films, TV series, and videos. Lastly, a surprising finding was that reading scored the lowest frequency out of all the EE activities.

As for the second research question, the majority of the pupils believed they learned a lot of English through EE activities. This was further supported when the pupils were asked to elaborate on their own learner beliefs regarding how they learned English best. The findings indicated that most of the participants considered EE activities to be the main source for them to learn English. However, this does not necessarily mean that the pupils viewed traditional classroom-based learning as irrelevant, as some of the pupils argued that certain types of classroom-based activities also helped them in their English development.

As regards the third research question, previous research suggests that the beliefs language learners have can affect how well they will master an L2 (Dörnyei, 2005; Lightbown & Spada, 2006; Sundqvist, 2009). In line with this argument, it seemed that the pupils' attitudes towards English and their beliefs may have played an essential role in their English development. The findings indicated that the participants with the most positive attitudes towards English and the strongest beliefs about their abilities also showed the highest English vocabulary proficiency, in contrast to the participants who were, in general, more negative.

Concerning the final research question, the study has shown that EE includes a wide range of activities, which, given enough time, may be beneficial for language learning. A pattern was identified indicating a positive relationship between a high amount of exposure to EE and English vocabulary proficiency. In addition, the different kinds of EE activities may be more beneficial for language learning than others. This was especially demonstrated when comparing the two most popular EE activities, such as digital games and TikTok. The boys spent most of their time on digital games, while the girls spent most of their time on TikTok. The results of the vocabulary test showed that the boys, in general, outperformed the girls. The participants who spent the least time on TikTok performed better than those who spent a lot of time on the same activity. Therefore, playing digital games seemed to be a more beneficial activity for L2 vocabulary acquisition in comparison to TikTok, and this may explain why the boys seemed to show a wider range of vocabulary than the girls. It should be noted that it is difficult to conclude whether it is the amount of time spent on EE activities that has influenced the sixth graders' vocabulary size the most. However, it certainly seems to have had some impact on it. Moreover, based on the large amount of time that was reported on playing digital games, it is inevitable that this activity has benefited the pupils' English vocabulary size.

To summarise, exploring the sixth graders' EE habits, their vocabulary proficiency, and their attitudes to and beliefs about English learning provided the researcher with an overall impression that there might exist a positive relationship between EE exposure and the pupils' English vocabulary proficiency. However, it should be noted that the findings in the study should not be overgeneralized, as there are some factors that were not investigated, such as for instance, the effect size of the different quantitative data variables. In addition, the participants' L2 proficiency was in general relatively high before their participation in this study, based on the results in the Norwegian national test in English, which was conducted before the study. Nevertheless, the data collected in this study is relevant since its main aim was to investigate the possible relationship between the Norwegian sixth graders' EE

exposure and English vocabulary proficiency. In short, despite the learners' young age, EE seems to function as a pathway to progress in English. It may therefore be reasonable to assume that it may be beneficial to be involved in EE activities at an early age.

6.2 Contribution, limitations, and implications for EFL teaching and further research

The present thesis has attempted to contribute to a broader understanding of younger language learners' EE habits and the influence EE has on their English vocabulary proficiency. In addition, it has attempted to expand one's knowledge within the field of EE in the Norwegian context. There has been little research on the topic in Norway, compared to other contexts, such as Sweden.

The results of this thesis have contributed to a better understanding of the kinds of EE activities Norwegian primary pupils are engaged in, and how EE might serve as a pathway for L2 vocabulary learning. Consequently, the findings can help EFL teachers facilitate their practice so that it is better suited to the learners' needs and interests. Teachers need to be aware of what types of EE activities the pupils are interested in. As a result, EFL teachers may be better equipped to help their students individually if they know more about their interests. Moreover, it may also enable EFL teachers in tailoring different assignments suited for each of the pupils' areas of interest. Consequently, it can make classroom-based learning more fun and stimulating, as many of the pupils viewed EE activities as a more fun and motivating way of learning English, which, according to previous research, is crucial for successful L2 acquisition (Krashen, 1982; Sundqvist, 2009; Dörnyei, 1990, 2005; Lightbown & Spada, 2006). Thus, the teacher has a responsibility to create a motivational learning environment. With better knowledge about EE and how this potentially can promote L2 vocabulary acquisition, it can help Norwegian EFL teachers implement such activities in the classroom or motivate pupils to engage in certain kinds of EE activities. It is therefore important for teachers to have more knowledge about the pupils' EE habits.

Moreover, the study showed worrying findings regarding how little time the pupils in the study spent on reading. This may indicate that EFL teachers need to pay attention to this activity and facilitate more extensive reading in their classes, or as part of the pupils' homework, as the amount of input is crucial for vocabulary growth to occur (Nation & Webb, 2017).

It is also necessary to acknowledge some limitations of this study. The main limitation of this study is the small sample size, namely 45 pupils. To get an even wider and more accurate picture of EE and its benefits on younger learners in the Norwegian context, more participants

are needed. However, as a consequence of the ongoing pandemic, this was not possible to implement this year, and, therefore, a small sample size was seen as the safest option to complete this thesis. For future research on younger learners' EE habits, a larger sample size should be considered. Conducting a study on participants from several schools and, if possible, schools from different parts of the country could also be an advantage. Moreover, conducting a study on different primary age groups may provide an even more accurate picture of EE and its benefits on younger learners.

Another limitation due to the small sample size in this study was the use of descriptive statistics in this study to provide basic information about the data and highlight potential relationships between the variables. A larger sample together with more advanced statistics is likely to give an even more accurate picture of EE and its effects.

The last limitation was the length of the language diaries. As a starting point, the language diary was supposed to be filled out during at least two weeks. However, this did not turn out according to the plan. Many pupils lost their diaries during the second week, and many forgot to fill out their diaries. As a consequence, the researcher decided to make the participants fill out their language diaries electronically, and due to a lack of time, the language diaries had to be cut down to one week only. For further research, the researcher would recommend expanding the language diaries for a longer period of time. This could potentially give an even better understanding of younger learners' engagement with EE, as it may be possible that the EE activities in which the learners participate in vary slightly from week to week.

Lastly, it would be interesting to do a longer study, making it an intervention study on younger learners' exposure to EE over a longer period of time, comparing their vocabulary size with a vocabulary test before and after their participation in the study. It may also be recommended that such a study can be conducted by an EFL teacher in his/her class, as it will make it easier to follow the progress of the pupils in the study, and, additionally, one could for instance measure the pupils' progress throughout a year of exposure to EE activities.

References

Benson, P. (2011). *Teaching and researching autonomy* (2nd ed.). Harlow: Pearson Education.

Brainbalancecenter. (2019,8. July). *Normal Attention Span Expectations By Age*. Brain Balance Achievement Centers. Retrieved from https://www.brainbalancecenters.com/blog/normal-attention-span-expectations-by-age

Christensen, L. & Johnson, R.B. (2019). *Educational Research: Quantitative, Qualitative, and Mixed Approaches* (7th ed.). SAGE.

Cohen, L, Manion, L., & Morrison, K. (2007). *Research methods in education* (6th edition.). London, England: Routledge.

Dahl, L. E. (2019). *Promoting EFL oral skills in and outside school: Norwegian lower secondary students' and their EFL teachers' experiences and beliefs*. (MA). Stavanger University, Stavanger.

Dahlström, A. (2007). *Könet sitter i hjärnan*. Göteborg: Corpus Gullers.

Denscombe, M. (2008). Communities of Practice: A Research Paradigm for the Mixed Methods Approach. *Journal of Mixed Methods Research*, 2(3), 270-283.

Dörnyei, Z. (1990). Conceptualizing Motivation in Foreign- Language Learning. *Language Learning*, 40(1), 45-78.

Dörnyei, Z. (2005). *The Psychology of the Language Learner: Individual Differences in Second Language Acquisition.* Mahwah, NJ: Lawrence Erlbaum.

Dörnyei, Z. (2007). *Research methods in applied linguistics: quantitative, qualitative and mixed methodologies*. Oxford: Oxford University Press.

Dörnyei, Z & Taguchi, T. (2009). *Questionnaires in Second Language Research: Construction, Administration, and Processing* (2nd ed.). Routledge.

Ehrman, M.E., & Oxford, R.L. (1995). Cognition Plus: Correlates of Language Learning Success. *The Modern Language Journal*, 79(1), 67-89. doi: https://doi.org/10.2307/329394

Ellis, N. (1994). Implicit and explicit language learning - An overview. In N. Ellis (ed.), *Implicit and explicit learning of languages*, 1-31. London: Academic Press.

Ellis, R. (1999). *Learning a Second Language through Interaction*. John Benjamins Publishing Company.

Ellis, R. & Barkhuizen, G. (2005). *Analysing Learner Language*. Oxford University Press.

Etikan, I., Musa, S. A. & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics,* 5(1) ,1-4. doi: http://dx.doi.org/10.11648/j.ajtas.20160501.11

Fraenkel, J.R., Wallen, N. E. & Hyun, H.H. (2012). *How to Design and Evaluate Research in Education* (8th ed.). New York, NY: McGraw Hill Education.

Gamerslearn. (2018, 21. June). *Scaffolding and Adoption in Video Games*. Gamerslearn. Retrieved from *https://www.gamerslearn.com/home/2018/6/11/scaffolding-and-adaptation-2-6m35t-bc6ct*

Gardner, R.C. & Lambert, W.E. (1972). *Attitudes and Motivation in Second Language Learning*. Newbury House Publishers.

Gardner, R. C., & MacIntyre, P. D. (1993). A student's contributions to second language learning. Part II: affective variables. *Language Teaching, 26*(1), 1- 11.

Gass, S. M., & Selinker, L. (2008). *Second Language Acquisition: An Introductory Cou*rse (3rd ed.). New York: Routledge.

Hiebert, E. H. & Kamil, M. L. (2005). *Teaching And Learning Vocabulary: Bringing Research To Practice*. Routledge.

Jakobsson, J. (2018). *A study of the types, frequency and perceived benefits of extramural activities on Norwegian 10th graders' development of English as a foreign language*. (MA). Stavanger University, Stavanger.

Krashen, S.D. (1982). *Principles and Practice in Second Language Acquisition*. New York: Pergamon Press Inc.

Krashen, S. (2013). *Second Language Acquisition: Theory, Applications and Some Conjectures*. New York: Cambridge University Press.

Laufer, B. & Hulstijn, J.H. (2001). Incidental vocabulary acquisition in a second language: The construct of task-induced involvement. *Applied linguistics, 22,* (1), 1-26.

Lightbown, P.M. & Spada, N. (2006). *How Languages are Learned* (3rd edition.). Oxford University Press.

Long, M.H. (1981). Input, interaction and second-language acquisition. *Annals of the New York Academy of Sciences,* 379, 259-278.

Long, M. H. (1987). Native speaker/Non-native speaker conversation in the second language classroom. In M. H. Long & J. C. Richards (eds.), *Methodology in TESOL: A book of readings,* 339-354. New York, NY: Newbury House

Medietilsynet. (2016). *Barn og Medier 2016*. Medietilsynet. Retrieved from https://www.medietilsynet.no/globalassets/publikasjoner/barn-og-medier-undersokelser/2016_barnogmedier.pdf

Medietilsynet. (2020). *Barn og Medier 2020*. Medietilsynet. Retrieved from https://www.medietilsynet.no/globalassets/publikasjoner/barn-og-medier-undersokelser/2020/201015-barn-og-medier-2020-hovedrapport-med-engelsk-summary.pdf

Nagy, W. E., Herman, P.A., & Anderson, R. C. (1985). Learning words from context. *Reading Research Quarterly*, 20 (2), 233-253. doi: https://psycnet.apa.org/doi/10.2307/747758

Nation, P. & Webb, S. (2017). *How vocabulary is learned* (2nd edition.). Oxford University Press.

Oxford house. (2020,4. August). *How To Learn English With TikTok.* Oxfordhouse Language Courses. Retrieved from https://oxfordhousebcn.com/en/how-to-learn-english-with-tiktok/

Pappamihiel, E. (2002). English as a Second Language Students and English Language Anxiety: Issues in the Mainstream Classroom. *Research in the Teaching of English*, 36(3), 327-355.

Ranalli, J. (2008). Learning English with The Sims: exploiting authentic computer simulation games for L2 learning. *Computer Assisted Language Learning*, 21(5), 441-455.

Reda, A. (2019). *A mapping study of multilingual students from minority backgrounds' extramural English use.* (MA). Oslo University, Oslo.

Rubio, F. (2007). *Self-Esteem and Foreign Language Learning*. Newcastle: Cambridge Scholars Publishing.

Sandelowski, M. (2003). Tables or Tableaux? The Challenges of Writing and Reading Mixed Methods Studies. In Tashakkori, A. & Teddlie, C. (eds), *Handbook of mixed methods in social and behavioral research*. London: Sage Publications, 321-350.

Sundqvist, P. (2009). *Extramural English Matters: Out-of- School English and Its Impact on Swedish Ninth Graders & apos; Oral Proficiency and Vocabulary.* (PhD). Karlstad University, Karlstad.

Sundqvist, P & Sylvén, L. K. (2016). *Extramural English in teaching and learning: from theory and research to practice.* London: Palgrave Macmillan.

Sylvén, L.K. & Sundqvist, P. (2012). Gaming as extramural English L2 learning and L2 proficiency among young learners. *ReCall*, 24, 302-321.

Utdanningsdirektoratet. (2019). *National Curriculum for Knowledge Promotion 2020: Curriculum in English (ENG01-04)*. Utdanningsdirektoratet. Retrieved from https://www.udir.no/lk20/eng01-04?lang=eng

Vahdat, S & Behbahani, A. R. (2013). The Effect of Video Games on Iranian EFL Learners' Vocabulary Learning. *The Reading Matrix*, 13(1), 61-71.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* USA: Harvard university press.

Webb, S.A. (2015). Extensive viewing: language learning through watching television. In D. Nunan & J.C. Richards (Eds) *Language Learning Beyond the Classroom*. New York: Routledge, 159-168.

Webb, S., Sasao, Y.& Balance, O. (2017). The updated Vocabulary Levels Test: Developing and validating two new forms of the VLT. *International Journal of Applied Linguistics*, 168(1), 33-69.

Wetcher-Hendricks, D. (2011). *Analyzing quantitative data: An introduction for social researchers.* John Wiley & Sons, inc.

Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory and Practice in Language Studies*, 3(2), 254-262.

Appendices

Appendix 1: NSD Approval

Det innsendte meldeskjemaet med referansekode 247940 er nå vurdert av NSD. Følgende vurdering er gitt: Det er vår vurdering at behandlingen av personopplysninger i prosjektet vil være i samsvar med personvernlovgivningen så fremt den gjennomføres i tråd med det som er dokumentert i meldeskjemaet den 10.12.2020 med vedlegg, samt i meldingsdialogen mellom innmelder og NSD. Behandlingen kan starte.

MELD VESENTLIGE ENDRINGER

Dersom det skjer vesentlige endringer i behandlingen av personopplysninger, kan det være nødvendig å melde dette til NSD ved å oppdatere meldeskjemaet. Før du melder inn en endring, oppfordrer vi deg til å lese om hvilke type endringer det er nødvendig å melde: nsd.no/personverntjenester/fylle-ut-meldeskjema-for-personopplysninger/melde-endringer-i-meldeskjema Du må vente på svar fra NSD før endringen gjennomføres.

TYPE OPPLYSNINGER OG VARIGHET

Prosjektet behandler særlige kategorier av personopplysninger om helse og alminnelige kategorier av personopplysninger frem til 18.05.2021.

LOVLIG GRUNNLAG

Prosjektet vil innhente samtykke fra de registrerte til behandlingen av personopplysninger. Vår vurdering er at prosjektet legger opp til et samtykke i samsvar med kravene i art. 4 nr. 11 og art. 7, ved at det er en frivillig, spesifikk, informert og utvetydig bekreftelse, som kan dokumenteres, og som den registrerte kan trekke tilbake. Lovlig grunnlag for behandlingen er dermed den registrertes uttrykkelige samtykke, jf. personvernforordningen art. 6 nr. 1 bokstav a, jf. art. 9 nr. 2 bokstav a, jf. personopplysningsloven § 10, jf. § 9 (2).

PERSONVERNPRINSIPPER

NSD vurderer at den planlagte behandlingen av personopplysninger vil følge prinsippene i personvernforordningen om:

• lovlighet, rettferdighet og åpenhet (art. 5.1 a), ved at de registrerte får tilfredsstillende informasjon om og samtykker til behandlingen
• formålsbegrensning (art. 5.1 b), ved at personopplysninger samles inn for spesifikke, uttrykkelig angitte og berettigede formål, og ikke viderebehandles til nye uforenlige formål
• dataminimering (art. 5.1 c), ved at det kun behandles opplysninger som er adekvate, relevante og nødvendige for formålet med prosjektet
• lagringsbegrensning (art. 5.1 e), ved at personopplysningene ikke lagres lengre enn nødvendig for å oppfylle formålet

DE REGISTRERTES RETTIGHETER

Så lenge de registrerte kan identifiseres i datamaterialet vil de ha følgende rettigheter: åpenhet (art. 12), informasjon (art. 13), innsyn (art. 15), retting (art. 16), sletting (art. 17), begrensning (art. 18), underretning (art. 19), dataportabilitet (art. 20).

NSD vurderer at informasjonen som de registrerte vil motta oppfyller lovens krav til form og innhold, jf. art. 12.1 og art. 13. Vi minner om at hvis en registrert tar kontakt om sine rettigheter, har behandlingsansvarlig institusjon plikt til å svare innen en måned.

FØLG DIN INSTITUSJONS RETNINGSLINJER

NSD legger til grunn at behandlingen oppfyller kravene i personvernforordningen om riktighet (art. 5.1 d), integritet og konfidensialitet (art. 5.1. f) og sikkerhet (art. 32).

SurveyXact er databehandler i prosjektet. NSD legger til grunn at behandlingen oppfyller kravene til bruk av databehandler, jf. art 28 og 29.

For å forsikre dere om at kravene oppfylles, må dere følge interne retningslinjer og eventuelt rådføre dere med behandlingsansvarlig institusjon.

OPPFØLGING AV PROSJEKTET

NSD vil følge opp ved planlagt avslutning for å avklare om behandlingen av personopplysningene er avsluttet.

Lykke til med prosjektet!

Kontaktperson hos NSD: Tlf. Personverntjenester: 55 58 21 17 (tast 1)

Appendix 2: Pupil consent form

Vil du delta i forskningsprosjektet

(Norwegian primary pupils' extramural English habits and English vocabulary acquisition)

Formål
Dette er et spørsmål til deg om å delta i et forskningsprosjekt i forbindelse med min masteroppgave ved Universitetet i Stavanger. Formålet er å forske på barneskoleelever sine vaner med engelsk utenfor skolen. Med dette menes alle aktiviteter der elevene møter det engelske språket i en kontekst som ikke har noe med skolen å gjøre og hvordan dette potensielt kan ha en positiv effekt på barnas ordforråd og muntlige ferdigheter. Eksempler på slike aktiviteter kan være å høre på musikk, spille dataspill, se på film og tv-serier på engelsk, surfe på internett, lese bøker osv. Forskningsprosjektet vil også undersøke hvordan elevene selv tror de lærer engelsk best. Du vil får spørsmål om hvilke typer engelskaktiviteter du driver med på fritiden og hvor mye tid du bruker på dem. I tillegg vil du få spørsmål knyttet til egne meninger og holdninger til engelskfaget.

Hvem er ansvarlig for forskningsprosjektet?
Forskningsprosjektet gjennomføres av Vetle Tønne Estensen i forbindelse med den avsluttende delen av min 5-årige lektorutdannelse ved kultur og språkvitenskapelige fakultet ved Universitetet i Stavanger. Deres deltakelse vil bli satt utrolig stor pris på.

Hvorfor får du spørsmål om å delta?
Deltakerne i dette prosjektet er valgt på bakgrunn av at jeg jobber som lærer ved den aktuelle skolen hvor jeg vil gjøre min forskning. Dette ser jeg på som den beste løsningen da vi er inne i usikre tider på grunn av Covid-19. Lærerne som har sagt ja til å bli med i prosjektet vil stille med en klasse hver, der elevene deltar gjennom å svare på et spørreskjema, utfylling av en 2-ukers lang språkdagbok og til slutt svare på en kort engelsk vokabulartest. Det har blitt gjort lignende studier i Norge tidligere, men alle disse studiene har fokusert på elever ved ungdomskoler og VGS. Det har ikke blitt gjennomført lignende forskning hvor fokuset har vært på barneskoleelever, så vidt jeg vet, men det er blitt gjort en lignende forskning i Sverige. Den studien viste hvilken effekt slike typer aktiviteter kan ha på elevenes ordforråd og muntlige ferdigheter i faget, noe som viste seg å være veldig effektivt. Derfor, vil en slik type studie gjort i Norge kunne gi nyttig informasjon til lærere og deres videre undervisning.

Hva innebærer det for deg å delta?
Hvis du velger å delta i prosjektet, innebærer det at du fyller ut et elektronisk spørreskjema. Det vil ta deg ca. 30 minutter. Spørreskjemaet inneholder spørsmål om hvilke engelskaktiviteter du driver med utenfor skolen, dine holdninger til engelsk og hvordan du selv tror du lærer engelsk best. Dine svar fra spørreskjemaet blir registrert elektronisk.
Du vil også bli bedt om å fylle ut en språkdagbok i 2 uker. Her vil du bli bedt om å oppgi hvor mye tid du bruker på de ulike engelskaktivitetene hver dag, i 2 uker. Helt til slutt vil du bli bedt om å gjennomføre en kort engelsk-test, dette er en test som tester ordforrådet ditt. Det vil si oppgaver som dreier seg om å sette inn rett ord i ulike sammenhenger. Dersom dere

foreldre ønsker å se spørreskjemaet og språkdagboken på forhånd, eller har andre spørsmål om prosjektet så er det bare å ta kontakt med meg.

Det er frivillig å delta
Det er frivillig å delta i prosjektet. Hvis du velger å delta, kan du når som helst trekke samtykket tilbake uten å oppgi noen grunn. Alle dine personopplysninger vil da bli slettet. Det vil ikke ha noen negative konsekvenser for deg hvis du ikke vil delta eller senere velger å trekke deg. Det vil heller ikke på noen måte påvirke ditt forhold til læreren din eller skolen, dette er ditt valg. Alle opplysninger vil være anonymisert. Forskningen vil etter all sannsynlighet foregå i to undervisningstimer, de som velger og ikke delta i forskningsprosjektet vil få et alternativt undervisningsopplegg å jobbe med imens de andre svarer på spørreskjemaet og testen. Språkdagboken fyller du ut hver dag i løpet av de to ukene. Det er viktig å huske og skrive ned antall timer du bruker hver dag.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger
Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrivet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Det vil kun være jeg og min veileder ved Universitetet i Stavanger som vil ha tilgang til disse opplysningene og det kreves ikke at du gir annen personlig informasjon enn navn og klassetrinn. All informasjon vil bli behandlet konfidensielt og all publikasjon vil være fullstendig anonymisert. Navnet ditt vil jeg erstatte med en kode som lagres på en egen navneliste adskilt fra øvrige data. Det er ingenting som du blir spurt om som vil avsløre din identitet, hvor du kommer fra eller hvilken skole du tilhører.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er i Mai/Juni 2020. Deretter vil alt bli slettet og makulert. Ingenting vil bli lagret eller beholdt etter prosjektslutt.

Dine rettigheter
Så lenge du kan identifiseres i datamaterialet, har du rett til:
- innsyn i hvilke personopplysninger som er registrert om deg, og å få utlevert en kopi av opplysningene,
- å få rettet personopplysninger om deg,
- å få slettet personopplysninger om deg,
- å sende klage til Datatilsynet om behandlingen av dine personopplysninger.

Hva gir oss rett til å behandle personopplysninger om deg?
Vi behandler opplysninger om deg basert på ditt samtykke.

Hvor kan jeg finne ut mer?
Hvis du har spørsmål til studien, eller ønsker å benytte deg av dine rettigheter, ta kontakt med meg på mail: vt.estensen@stud.uis.no eller ved telefonnummer 48191855, eller ta kontakt

med min veileder, ansatt på Universitetet i Stavanger Dina Lialikhova, dina.lialikhova@uis.no
.

Med vennlig hilsen

Masterstudent Vetle Tønne Estensen

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet (Norwegian primary pupils' extramural English habits and English vocabulary acquisition)

og har fått anledning til å stille spørsmål. Jeg samtykker til:

- ☐ å delta i dette forskningsprosjektet gjennom å svare på et spørreskjema, fylle ut en språkdagbok og gjennomføre en kort engelsk vokabular-test.
- ☐ Jeg samtykker til at mine opplysninger behandles frem til prosjektet er avsluttet, ca. Juni 2020

(Signert av prosjektdeltaker, dato)

Appendix 3: Language Diary

Language diary extramural English / Språkdagbok

Hvilke engelskaktiviteter driver du med på fritiden din?
Dette er en dagbok der du skal fylle ut hvor mye tid du bruker på engelskaktiviteter som ikke har noe med skolen å gjøre. Dette skal fylles ut hver dag i 1 uke.

Skriv kun ned tiden dere har brukt på aktiviteter som er på engelsk. Ikke skriv ned tiden dere har brukt på aktiviteter som ikke er på engelsk.

OBS!
Husk å svare så ærlig og nøyaktig som dere kan!

NAVN: _____

KLASSE: _____

Mandag: _____

Hvilke engelskaktiviteter driver du med på fritiden din?

Aktiviteter		Tid totalt: Skriv ned timer og minutt.
Lese bøker	Tittel:	
Lese aviser/ magasiner	Navn:	
Se på tv-programmer (på tv eller pc/tablet)	Navn:	
Se på film (på kino, på tv, tablet, Netflix, DVD osv.)	Navn:	
Surfe på internett	Eksempel på sider:	

Spille dataspill	Eksempel:	
Synging	Eksempel:	
Youtube	Eksempel:	
TikTok	Eksempel:	
Høre på musikk (sanger)	Eksempel:	
Twitch		
Andre aktiviteter	Eksempel:	

Appendix 4: Pupil's Questionnaire

100%

Spørreskjema om engelsk utenfor skolens vegger.

Hei, jeg heter Vetle Tønne Estensen og jobber som lærer i Stavanger.Dette spørreskjemaet er en del av et forskningsprosjekt til min masteroppgave. Det er viktig å huske på at alle svarene dere gir handler om den engelsken dere bruker utenfor klasserommet. Med dette menes all engelsk dere driver med på fritiden, som ikke har noe med skolen å gjøre. Dette kan være når dere ser på tv på engelsk, ser på YouTube, ser film, hører på musikk, spiller videospill osv. Det er også viktig at dere husker på at alle svarene dere gir vil bli gjort helt anonyme.
Det er veldig viktig at dere svarer så ærlig som dere kan!

Tusen takk!

1. Navn

2.Hvilken klasse går du i?

- 6A
- 6B

3. Har du tilgang til din egen PC eller annen digital enhet (tablet, telefon)

- Ja
- Nei

4. Dersom ja, har du tilgang til internett?

- Ja
- Nei

Dine holdninger til engelsk

Denne delen handler om hvilke tanker du har om engelsk, er det noe du liker/ikke liker, hvor viktig er engelsk for deg, og hvordan tror du at du lærer engelsk best.

5. Hvor godt liker du engelsk?

- Jeg liker engelsk veldig godt
- Jeg liker engelsk godt
- Jeg liker engelsk litt
- Jeg liker ikke engelsk

6. Synes du at engelsk er et viktig fag? (Svar i fulle setninger hvorfor du synes engelsk er viktig, eller hvorfor du ikke synes det er viktig)

7.Hvor gode synes du at dine muntlige ferdigheter i engelsk er?(1 er veldig dårlig og 10 er veldig bra)

1 2 3 4 5 6 7 8 9 10

8. Hvor fornøyd er du med ordforrådet ditt i engelsk?(1 er veldig lite fornøyd, 10 er veldig fornøyd)

1 2 3 4 5 6 7 8 9 10

9. Hvor lett eller vanskelig synes du at det er å snakke med andre på engelsk?(1 er veldig vanskelig, 10 er veldig lett)

1 2 3 4 5 6 7 8 9 10

10. Hvilke av disse elementene er viktigst for deg for å lære engelsk? (velg alle boksene du mener er viktige)

- [ ] Grammatikk
- [ ] Lesing
- [ ] Muntlige diskusjoner
- [ ] Skriving
- [ ] Drama
- [ ] Film
- [ ] Engelskaktiviteter du driver med utenfor skolen

11. Her er det flere utsagn om engelsk, kryss av alle boksene som du er enig i

- [ ] Engelsk er viktig
- [ ] Jeg vil trenge engelsk i framtiden
- [ ] Jeg er komfortabel med å snakke engelsk
- [ ] meg nervøs når jeg snakker
- [ ] Engelsk er uinteressant
- [ ] Engelsk er vanskelig
- [ ] Engelsk er gøy

12. Jeg lærer engelsk best hjemme (er du enig eller ikke)

- ( ) Veldig enig
- ( ) Enig
- ( ) Litt enig
- ( ) Vet ikke
- ( ) Litt uenig
- ( ) Uenig
- ( ) Veldig uenig

13. Hvordan tror du at du lærer engelsk best? (Svar i fulle setninger og kom gjerne med flere eksempler)

Eksponering til det engelske språket

Denne delen handler om hvor mye tid dere bruker på engelsk utenfor skolen.

14. Har du vært i noen land hvor du måtte snakke engelsk?

- Ja
- Nei

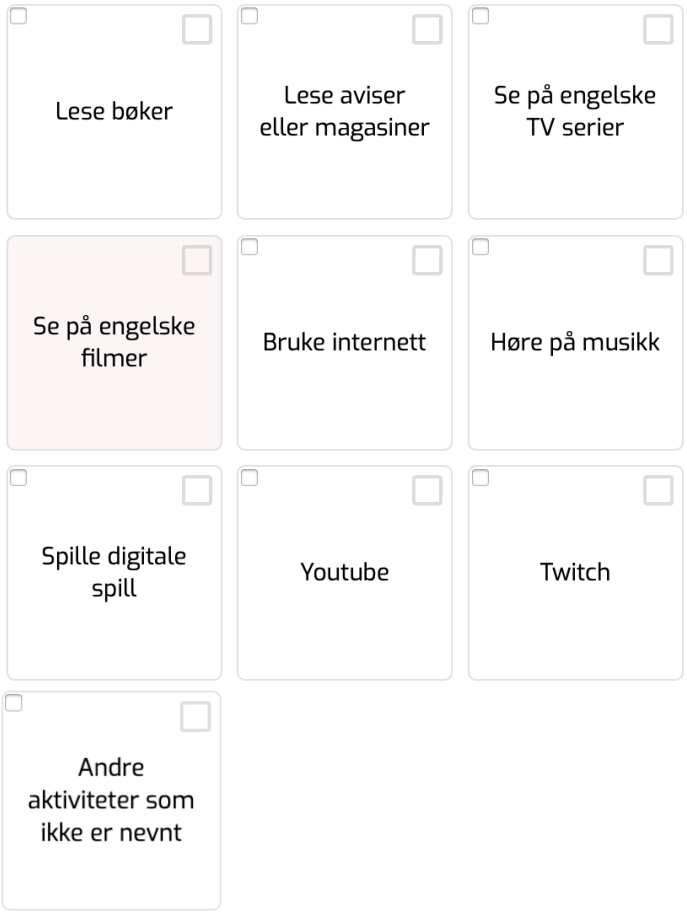
15. Hvem snakker du engelsk med på fritiden?(Kryss av alle som passer)

- Venner
- Familie
- Mennsker som man spiller med online
- Mennesker man chatter med
- Andre måter som ikker er nevnt
- Ingen

16. Hvor ofte snakker du engelsk på fritiden?

- Hver dag utenfor skolen
- Noen ganger i uken
- Noen ganger i måneden
- Noen ganger i løpet av året

17. Hvilke engelskaktiviteter driver du med på fritiden? (Kryss av alle boksene som passer for deg)



18. Dersom det er noen engelske aktiviteter du driver med på fritiden, som ikke var nevnt i forrige spørsmål så kan du skrive dem ned her.

19. Hvor ofte ser du på engelske tv-serier eller filmer

- Aldri
- 1 time i uken
- Mellom 2 og 3 timer i uken
- Mellom 3 og 5 timer i uken
- Mellom 5 og 7 timer i uken
- Mellom 7 og 9 timer i uken
- Mellom 9 og 11 timer i uken
- Mer

20. Føler du at du lærer engelsk av å se engelske filmer, TV serier eller videoer på nettet (Twitch, Youtube)?

- Jeg lærer mye av dette
- Jeg lærer ganske mye av dette
- Jeg lærer lite av dette
- Jeg lærer ingenting av dette
- Jeg ser aldri på engelske filmer

21. Hvor ofte leser du på engelsk? (Trenger ikke å være en bok, det kan være internett, aviser osv.)

- Hver dag
- Nesten hver dag
- Sjeldent
- Nesten aldri

22.Føler du at du lærer engelsk av å høre på engelsk musikk?

- Jeg lærer mye av det
- Jeg lærer litt av det
- Jeg lærer veldig lite av det
- Jeg lærer ingenting av det
- Jeg hører ikke på engelsk musikk.

23. Hvor ofte tror du at du hører på engelsk musikk?

- Aldri
- 1 time i uken
- Mellom 2 og 3 timer i uken
- Mellom 3 og 5 timer i uken
- Mellom 5 og 7 timer i uken
- Mellom 9 og 11 timer i uken
- Mer

Gaming

Denne delen handler om dine spillevaner. Husk at alle spørsmålene har med engelsk å gjøre.

24. Hvor ofte spiller du digitale spill på engelsk?

- Noen ganger i løpet av året
- 1 time i uken
- Mellom 2 og 3 timer i uken
- Mellom 3 og 5 timer i uken
- Mellom 5 og 7 timer i uken
- Mellom 7 og 9 timer i uken
- Mellom 9 og 11 timer i uken
- Mer
- Aldri

26.Føler du at du lærer engelsk når du spiller digitale spill?

- Jeg lærer mye av dette
- Jeg lærer litt av dette
- Jeg lærer veldig lite av dette
- Jeg lærer ingenting av dette
- Jeg spiller ikke digitale spill

28. Skriv ned dine tre favorittspill. For eksempel Fortnite, Sims, Roblox osv.

Tusen takk for dine svar!

Tusen takk, for at dere tok dere tid til å svare på dette spørreskjemaet! Dette vil være til stor hjelp i mitt videre arbeid, og jeg setter stor pris svarene deres!

Appendix 5: Vocabulary Test

Vokabulartest (extramural English)

Navn: _____

Klasse: _____

DEL A Poeng totalt: / 9

Fyll inn bokstavene som mangler slik at du får det rette ordet som passer til setningen.

Eksempel: There are a doz_____ eggs in the basket.
There are a dozen eggs in the basket.

1. I'm glad we had this opp_____ to talk.
2. The dress you are wearing is lov_____.
3. The pirates buried the trea_____on a desert island.
4. The rich man died and left all his we_____to his son.
5. This sweater is too tight. It needs to be stret_____
6. Ann intr_____her boyfriend to her mother.
7. Teenagers often adm_____ and worship pop singers.
8. The telegram was deli_____ two hours after it had been sent.
9. He wasn't very popu_____when he was a teenager, but he has many friends now.

DEL B Poeng: / 15

I denne delen av testen skal dere velge det ordet som passer med en av de tre setningene. Skriv nummeret på ordet ved siden av setningen. Se på eksempelet under.

Eksempel:

1.Dog
2.Wall __2___ Part of a house
3.Pencil
4.Flesh __3__ Something used for writing
5.Knife
6.Boots __1__ Animal with four legs

1.)

1 accident _____ loud deep sound
2 motor
3 fortune _____ this moves a car
4 pride
5 roar _____ having a high opinion of yourself
6 thread

2.)

1 birth _____ game
2 dust
3 operation _____ winning
4 row
5 sport _____ being born
6 victory

3.)

1 brave _____ a drink

2 frame

3 noise _____ not afraid

4 respect

5 theatre _____ unwanted sound

6 soda

4.)

1 dozen _____ chance

2 empire

3 gifts _____ wanting food

4 opportunity

5 relief _____ something you get for your birthday

6 hungry

5.)

1 bitter _____ beautiful

2 independent

3 lovely _____ like more than something else

4 merry

5 popular _____ liked by many people

6 prefer