

**Beyond the English Classroom: A Study of Upper
Secondary School Students' Extramural English in Norway**



Alison J. Rød

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Master's Thesis

Department of Foreign Languages, University of Bergen

In loving memory of

*my brother, who was here for the start and the middle, but left
us far too early before the end*

Acknowledgements

I have flippantly likened the past few weeks of writing my Master's - to anyone who would listen - as akin to childbirth. There are many similarities and as a mother of five, I should know. There's the roller coaster mixture of excitement, relief that it's nearly over and the sheer panic at the realisation that you will soon be responsible for a new creation: a creation that you dearly care for. And of course there's the birth partner, or in the case of a Master's the multiple birth partners: some getting their hands squeezed tighter than others. I would therefore like to take this opportunity to thank them all.

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Alison Jones Rød May 2022

Abstract in Norwegian

Formålet med dette studiet har vore å undersøka norske elevar sin bruk av *extramural English* (EE) (engelsk utanfor klasserommet), til å identifisera ulikskapar mellom kjønn og for å sjå samanhengen mellom elevar sin EE og resultat i engelskfaget på skulen.

Dette studiet tar for seg to TAF vidaregåande klasser på VG1. Klassane bestod til saman av 42 elevar (19 gutar og 23 jenter). Dataa frå studiet vart samla gjennom spørjeundersøking, vokabulartestar og skuleoppgåver. Målet med spørsmåla i spørjeundersøkinga var å samla bakgrunnsinformasjon, informasjon om elevane sin bruk av engelsk utanfor klasserommet, og elevane sitt syn på eigen bruk av engelsk i og utanfor skulen. I tillegg vart to små grupper bedne om å skrive dagbok i minst ein veke om korleis dei brukar engelsk utanfor skulen. Resultata visar at elevane brukar mange forskjellige type EE og omfanget av elevanes bruk av engelsk utanfor klasserommet varierer frå elev til elev. I tillegg brukar dei lite engelsk på jobb.

Ein stor del av eksponeringa av det engelske språket elevane registrerte, kan gjenspeglast i elevanes bruk av engelsk i klasserommet, både gjennom resultata på vokabularprøvene og elevanes antyding til at dei opplever skriftleg og munnleg engelsk på skulen som vanskeleg. Det latar til at elevane brukar det som essensielt er eit L2-språk, i sosiale situasjonar, og svært få av dei er skeptiske til eksponeringa dei er utsette for. Dei er motiverte til å betra ferdigheitene sine i engelsk.

Kjønn har lite å si for omfanget av engelsk utanfor klasserommet, men gutane brukar meir tid på YouTube og gaming. Forskjellane mellom jenter og gutar er større når det kjem til korleis elevane presterer i faget på skulen. Jentene fekk gjennomsnittleg betre resultat enn gutane, noko som reflekterer europeiske trendar. Det er også tydeleg i denne studiegruppa at det er manglande samheng mellom *location of learning* (læringsstad) og *locus of control* (kontrollplassering) når det kjem til den engelske språkutviklinga. Desse resultata har didaktiske implikasjonar når det gjeld elevar i norsk vidaregåande skule og deira bruk av engelsk utanfor klasserommet, noko som gjer det enklare å identifisera områder der det er eit behov for meir forskning.

Abstract in English

This Master's thesis set out to investigate upper secondary school students' extramural English, in Norway. Data analysis was carried out on the extent and types of students' extramural English (EE); any correlations between their EE and their in-school achievements, as well as the identification of any gender differences within these findings.

Two technical general studies (TAF) education classes, at the same school, were studied consecutively, each for a year, totaling 42 participants (19 boys and 23 girls). Data was collected through a questionnaire, designed in order to: collect background information; information on EE and also the students' views on their extramural and in-school English. In addition, two small case study groups were assigned from the two TAF classes and asked to fill in language diaries of their EE for at least seven days. Results show that the students were involved in substantial amounts of EE which varied greatly within the study group and that they were exposed to very little extramural English in their workplace. In addition, the gender gap was seen to be especially prevalent in terms of the students' in-school achievements, whereby girls achieved higher grades than boys, reflecting European trends. The results also suggest that the predominance of receptive English exposure extramurally, may be reflected in the students' in-school (intramural) vocabulary scores and their views on intramural English.

Students seem to embrace using what is essentially an L2 language in social situations and very few of them are sceptical about the level of exposure they are now subjected to. Indeed, they are motivated to improve their proficiency in English. Also evident in this study group is the clear lack of a relationship between the locations of learning and locus of control, regarding English language development. These results have didactic implications and suggestions that can help Norwegian upper secondary students further develop their English language skills, together with helping to identify areas where more research is needed.

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List of Abbreviations

EE - Extramural English

L1 - First Language

L2 - Second Language

ESL - English as a second language

EFL - English as a foreign language

FYR - Common core subjects, vocational orientation and relevance

SLA - Second Language Acquisition

UG - Universal Grammar

CLIL - Content and language integrated learning

AWL - Academic Word List

LSRW – Listening, speaking, reading and writing

Chapter 1: Introduction

1.1 Introductory Prologue

Since moving to Norway from Great Britain in 2001, I have observed a tangible increase in the amount of English my students have become engaged in and exposed to outside of the English classroom. This has been noticeable in all of age-groups that I have been involved with, ranging from primary school pupils up to more mature students at evening school. It is clear that Norwegians, not least students, are increasingly embracing the wealth of immersive experiences available to them. Snapchat, Facebook, YouTube, Netflix, Fortnite, Spotify, the list goes on and there always seems to be a new kid on the block. When the present Master's thesis started, the phrase 'TikTok' was the onomatopoeia of the sound a clock makes, rather than a popular social app that teenagers spend hours thumbing through. The content is becoming ever-more sophisticated, appealing and easily accessible for a youth armed with new technologies. A chance meeting with Lisbeth Brevik, during my time as a FYR (common core subjects, vocational orientation and relevance) coordinator, fuelled my curiosity even further. Brevik (2016) had carried out research on 16 year olds at upper secondary school taking vocational courses. Her study found a positive correlation between the amount of time these students spent gaming and their L2 reading and vocabulary proficiencies in English. The study also noted that boys, rather than girls, showed a tendency to be frequent gamers. Brevik's study together with my own growing awareness naturally led to the emergence of a research question revolving around students' exposure to English outside of the classroom, also beyond the realms of gaming. However, information about English outside the classroom, as interesting as it may be, has to give some meaning to the English that I teach inside the classroom. Therefore, connecting these two elements led to an overarching research question as to how much and what types of out-of-school English the students were engaged in and did it have any bearing on their in-school English: the two main research questions which emerged, are presented in Section 1.6.

1.2 Curriculum

The Ludvigsen Committee was created by Royal Decree on 21st June 2013, with a mandate to look into primary and secondary education in Norway and evaluate its capability of providing its students with competencies relevant for the nation's future

needs. The committee published an interim report - NOU 2014:7- based upon input from various organisations and businesses, in which, amongst other recommendations, emphasis was placed on the need for language skills and cultural knowledge due to increasing globalisation (Ludvigsen, 2014). This report, together with other contributions, led to a renewal process of the curriculum and in August 2020 the new National Curriculum for Knowledge Promotion in Norway, LK20, was implemented. The NOU's recommendations were carried through to the new English subject curriculum at upper secondary level wherein they underlined the importance of having English language skills in an increasingly globalised world. There is a clear recognition that Norwegian students need to acquire English language skills that will allow them to function optimally in their local as well as the global community.

Fortunately Norwegian students, alongside Danish and Swedish students, are recognised as having relatively high levels of proficiency in English compared to their European counterparts, as shown graphically in Bonnet's (2004) European commissioned report in 2002. Norway, together with Denmark and Sweden, was also one of the few countries in the world, having English as an L2, to receive a 'very high' English Proficiency Index (EPI) by Education First in 2021 (EF, 2021). In fact, for the last decade, a number of researchers have argued that English should not be defined as a foreign language (EFL) in Norway (Rindal & Piercy, 2013). Nonetheless, English lacks an official status as a second language (ESL). Horverak (2015) and Rindal (2019) both argue that its status is neither EFL or ESL and Rindal (2019) goes on to describe it as being in "transition from one place to a yet unknown other" (p. 350). Brevik and Rindal (2019) therefore opted to use the more generic *L2 English* term, emphasising that this refers to English as a "*second or later language*" (p. 435).

Some researchers (e.g. Bonnet, 2004; Richards, 2009; Swedish National Agency 2012), have accredited these high levels of English proficiency to the amount of time Scandinavian students are exposed to English outside of the classroom. Furthermore, a number of studies have shown that students themselves also attribute their English proficiency to English outside the classroom, rather than to their in-school English (e.g. Bonnet, 2004; Busby, 2015).

Pia Sundqvist (2009), a Swedish researcher, interested in this English outside the classroom, coined the phrase 'extramural English' (p. 64), as detailed in *Theoretical Background 2.3.1*. Put simply it means English outside the walls of the classroom.

1.3 Extramural English

Benson (2011) pointed out, a little over a decade ago, that “in contrast to the many thousands of published studies on classroom language learning in the recent literature, there are very few studies of language learning beyond the classroom” (p. 8); and as such attempted to introduce a rudimentary framework of terminology to be used in what has become an increasingly active research field (see *Theoretical Background 2.3.1*).

There have been a number of studies, especially in the last decade, which have English language learning beyond the classroom at their core (e.g. Pearson, 2004; Berns et al., 2007; Sunqvist, 2009; Aniol, 2011; Brevik, 2012, 2019; Fisher et al., 2012; Sundqvist & Wikström, 2014; Sylven & Sundqvist, 2014, 2016; Peters & Webb, 2018; Holm, 2020; Qasim, 2021; Warnby, 2021). In Norway¹, the Vocational and General students’ Use of English in and out of School Project (VOGUE) started in 2015, is focused on combining “large-scale data with case study data among students and teachers in secondary school, aiming to understand why some students read markedly better in English than in Norwegian and how different languages are used in and outside of school” (VOGUE p. 1). This project has generated a number of peer-reviewed papers and Master’s theses (e.g. Brevik, 2016, 2019; Garvoll, 2017; Brevik & Hellekjær, 2018; Ahmadian, 2018; Holm, 2020).

However, despite this recent flurry of activity, extramural English is still a relatively new field of research and intrinsically, one that is becoming increasingly important for tech-savvy Norwegian students. As a result there is still a need for more broad-based empirical data relating to students’ extramural English exposure in Norway, as well as more nuanced case studies. Holm (2020) indeed concludes in her recent thesis, which is part of the VOGUE project, that there is a lack of research on extramural English in Norway². More specifically there appears to be no studies that have focused on students taking the technical general studies course, known as TAF. This particular course is interesting because it combines elements of both vocationally orientated (YF) and general study (SF) courses.

Swedish researchers have also been active in collecting broad-based data on extramural English and have presented some interesting findings, but as Sundqvist (2009) pointed out, there is a need for more empirical studies, especially large-scale ones, that combine this data on linguistics activities outside of school with learning outcomes in

¹ Based at the University of Oslo

² “Not much research on how adolescents interact with English out of school in Norway” (p. 79)

school. Of course, this relationship between extramural and in-school English is of great interest to teachers such as myself.

The few studies that have collected empirical data and attempted to establish correlations with in-school learning outcomes, have looked at motivation towards learning English and reading proficiency (e.g. Piirainen-Marsh & Tainio, 2009; Brevik, 2016; Brevik & Hellekjær, 2017); oral proficiency and vocabulary size (Sundqvist, 2009; Sylven & Sundqvist, 2012; Olsson, 2012; Sundqvist & Wikström, 2015); incidental vocabulary acquisition (Qaim, 2021); general vocabulary (e.g. Peters et al., 2019; Sundqvist and Sylvén, 2012); academic vocabulary knowledge (Sylven & Olsson, 2015; Warnby, 2021) and achieved grades (e.g. Olsson, 2012; Sundqvist & Wikström, 2015). Sundqvist & Wikström, (2015) showed for instance, that frequent gamers in Sweden had the “highest rated essays, used the most advanced vocabulary in the essays, and had the highest grades” (p. 65). The Swedish National Agency for Education similarly reported a clear correlation between comprehension and extramural English, but found no correlation with respect to writing proficiency (cited in Olsson, 2012).

Even fewer have tried to correlate specific aspects of language with EE. Puimège and Peters (2019) conclude that “research has not yet addressed the question of which words are more likely to be picked up from EE” (p. 3). Schmitt (2019), amongst others, has called for more research looking at how EE can best facilitate vocabulary acquisition, for example, but there are many other research avenues that can potentially be explored.

Researchers have raised the question as to whether in-school English teaching should adapt itself to students’ extramural English activities (e.g. Ørevik, 2015; Hellekjær, 2016; Garvoll, 2017). Drotner et al. (2008) pointed out that “school is seen as no longer holding a monopoly on resourcing literacies that are deemed necessary for 21st century” (p. 14), and Aniol (2011) accuses schools of lacking institutional acknowledgment of collaborative and participatory learning. A number of researchers have already pointed out the multimodal, interactive and social aspects of out-of-school learning which contrast sharply with the analogue, print media of classroom learning (e.g. Kuure, 2011). Kuure (2011) goes on to suggest that the advanced multiliteracies typified by out-of-school learners are under-utilized in schools. Such introspection is becoming more widespread. Hellekjær (2012a, 2012b, 2016) believes that many students (in Norway) regard the English they learn in school as being largely irrelevant and goes on to say that schools are missing out on the opportunity, in their lessons, to engage and capitalise on the considerable competence and skills of these students, gained from using English outside of the classroom. Ørevik (2014) posed the question as to whether EFL instruction should

attempt to exploit the whole textual repertoire of today's teenagers or remain selective in generic choices for teaching and learning.

Two concepts that may prove useful here are those of *public pedagogy* (Giroux, 1994) and *affinity spaces* (Gee, 2004). Both concepts, discussed in detail in Chapter 2, encourage teachers to rethink their education practises, by taking into account the new learning spaces that, technology especially, have opened up for students outside of the traditional classroom. This need to integrate extramural and in-school English, in some form, is a pervasive argument throughout the present Master's thesis and will be addressed in detail in the final chapter.

The increase in cultural and linguistic diversity that now embraces students was seen by the New London Group (1996) as critical in their call for the establishment of multiliteracies. Lund (2003) re-iterated this need for multiliteracies from an EFL community's perspective, describing the community itself as being "global, multicultural, technology-infused, and dynamic" (p. 80). This changing notion of text and literacy and its implications for the classroom is just part of what Crystal (2001) describes as the rapid linguistic transition. He strongly believes that:

...teachers need to prepare their students for a world of staggering linguistic diversity. Somehow they need to expose them to as many varieties of English as possible, especially those that they are most likely to encounter in their own locale. And above all, teachers need to develop a truly flexible attitude towards principles of usage. The absolutist concept of 'proper English' or 'correct English', which is so widespread, needs to be replaced by relativistic models in which literary and educated norms are seen to maintain their place alongside other norms, some of which will depart radically from what was once recognized as 'correct. (Crystal, 2001a, p. 19)

The Knowledge Promotion 2020 Curriculum in Norway reflects Crystal's views. As part of the Education Department's core elements "Working with texts in English", they outline that:

The concept of text is used in a broad sense: texts can be spoken and written, printed and digital, graphic and artistic, formal and informal, fictional and factual, contemporary and historical. The texts can contain writing, pictures, audio, drawings, graphs, numbers and other forms of expression that are combined to enhance and present a message. Working with texts in English helps to develop the pupils' knowledge and experience of linguistic and cultural diversity, as well as their insight into ways of living, ways of thinking and traditions of indigenous

peoples. By reflecting on, interpreting and critically assessing different types of texts in English, the pupils shall acquire language and knowledge of culture and society. Thus, the pupils will develop intercultural competence enabling them to deal with different ways of living, ways of thinking and communication patterns. They shall build the foundation for seeing their own identity and others' identities in a multilingual and multicultural context. (Ministry of Education and Research, 2019)

If these challenges are to be met, then empirical data collected on students' extramural activities is becoming ever more important, because it will help establish an understanding of the types of texts students are exposed to outside of school and explore ways in which they can be integrated into in-school English lessons, as well as helping teachers identify any areas of requirement.

From the students' perspective, a number of studies have shown that a significant number of students give little credit to their in-school English in terms of their development of English language skills. Bonnet (2004) pointed out that only 13% of participants rated English lessons as being important to their knowledge of English, whereas Media, books, gaming and even reading textbooks were rated by more of them as 'very important'. Furthermore, Busby's (2015) investigation of university students in Norway, found that 30% of students felt that their school English lessons had not prepared them for the English they encountered at university. Shirazi (2010) expressed similar sentiments in their Master's thesis.

Bonnet (2004), in his European report, mentioned earlier, found that Norwegian pupils seem to master the receptive skills, in particular reading and oral comprehension whilst scoring lowest in written English: tasks that required correct production of written English and correct spelling scored the lowest. More recently Horverak (2015) similarly suggested that written English is a skill that Norwegian students find the most challenging. Empirical data of extramural English should help shed more light on levels of exposure and activity in receptive and productive English outside of school.

PISA 2018 revealed that in Norway, the gender gap in reading³ was higher than the average gap across OECD countries (see Borgonovi et al. 2018; Frønes et al. 2020). A similar gap was observed in 2009. Although lower levels of academic achievement and attainment amongst boys in OECD countries is not a recent phenomenon, it has become increasingly pronounced and, as a result, is attracting considerable attention from

³ A gender gap between girls and boys of 47 score points

policymakers in many countries (Borgonovi et al., 2018). The OECD working paper goes onto suggest that Norway could consider the following policies:

Testing and evaluating interventions to improve boys' motivation to read. Evidence shows that boys need more than girls to be interested in the content of the reading material in order to read. Providing them with reading materials on subjects that speak to their interests and hobbies and that are adapted to their reading levels is therefore important to create the habit of reading for leisure and develop their reading skills. (p. 107)

As such, any data collected regarding boys' extramural English activities could prove invaluable towards developing didactic approaches that will help raise the level of boys' academic achievements.

1.4 Vocabularies

The importance of vocabulary in language acquisition has long been recognised (e.g. Schmidt, 2014; Nation, 2013; Coxhead, 2000). Significant correlation has been found between knowledge of general vocabulary and achievement in L2 English and more specifically between academic English lexis and academic achievement (Skjelde & Coxhead, 2020). Other vocabularies that have to be considered are *technical* which is touched upon below and the vocabulary typical of extramural English activities, that adorns the Internet, social media sites and the gaming world amongst others, as alluded to in the previous sections. As Crystal (2001b) points out "Netspeak is a development of millennial significance" (pp. 238-239).

Vocabulary has certainly received a more nuanced focus in the new LK20 English curriculum. The competence aims in the general studies curriculum outline that the student should be able to "listen to, understand and use academic language in working on one's own oral and written texts," (Ministry of Education and Research, 2019). Whereas the vocational curriculum stipulates that the students should be able to "listen to, understand and use terminology appropriate for the trade, both orally and in writing, in work situations". They should also be able to "read and summarise vocational content from English-language documentation". The Norwegian version of the Curriculum uses the term *fagterminologi*. However, the English translation, as shown above, uses the expression 'terminology appropriate for the trade,' avoiding a definitive term. Perhaps the term *technical vocabulary* would be appropriate, as used by Coxhead & Demecheleer (2018), in their study of trainee plumbers in New Zealand. They pointed out how little was

known about such vocabularies as well as highlighting the support needed if students were to acquire this technical vocabulary and the difficulties that their tutors faced.

No mention is made in the curriculum of vocabularies that are typically found in extramural settings relating to media such as social media or gaming, but it does stipulate that students can “discuss and reflect on the form, content and language features and literary devices in different cultural forms of expression from different media in the English-language world, including music, film and games”. As outlined above, previous studies have shown music, films and video games to be popular extramural activities.

1.5 Extramural English in the Workplace

The FYR-project (common core subjects, vocational orientation and relevance) was launched in 2011 as a continuation of Ny Giv⁴. Its aim was to create common core subject lessons and resources, which were vocationally oriented and relevant to the different vocational education programmes the students were enrolled in. It was essentially borne out of a desire to reduce the drop-out rate in upper secondary school of students, more especially boys, from vocational courses. FYR provided an impetus for several studies focusing on vocational English students which occurred at this time (e.g. Sleveland, 2014; Befring 2015; Brevik, 2016). However, there still appears to be a lack of data relating to any extramural English used in the workplace of vocational students in Norway, more especially those whose study program is part vocational, part academic (TAF). As outlined above, the new curriculum places emphasis on the technical vocabulary and in addition expects students to be able to “outline others’ arguments and use and respond to others’ contributions in conversations and discussions on vocationally relevant issues,” (Ministry of Education and Research, 2019). Knowledge of vocationally relevant (technical) vocabulary is therefore crucial.

1.6 Aims, Scope and Outline of the Thesis

As outlined in Section 1.1, an overarching research question emerged regarding how much and what types of out-of-school English the students were engaged in and whether it had any bearing on their in-school English. The study naturally inclined itself towards upper secondary students, since the author was working with this age-group at the time. A

⁴ ‘Ny Giv’ was a national initiative introduced in 2011. Its goal was to increase the number of students completing Upper Secondary School in Norway.

review of the literature, as outlined briefly above and in more detail in Chapter 2, had revealed a number of interesting points of curiosity. For instance, how much English are Norwegian students at upper secondary level exposed to extramurally? What types? What is the most popular activity? Are they engaged in more receptive or productive English? Are there any gender differences? Curiosity had well and truly been piqued. As mentioned previously, as a teacher, connecting these findings in some way to the English classroom was seen as central. A number of avenues were explored and considered in order to address this particular aspect and it certainly proved to be the most challenging. Initial thoughts centred around proficiency in written English, since there are so few studies attempting this and written proficiency has been earmarked as a failing area in Norway (see Bonnet, 2004). However, a review of the literature quickly revealed why there are perhaps so few studies. Measuring indicators of writing proficiency is far from straightforward (see Polio, 2001). Focusing on a specific vocabulary such as academic vocabulary was also considered, but the realisation that its inclusion would push this thesis beyond the confines of the allotted 110 pages, meant that it was discounted. The most straight forward option seemed to be to find out if the students' extramural English exposure correlated with their in-school English achievements. In addition, gender differences were considered an important aspect of the research problem. The Research Questions are therefore framed in the following way:

*Research Question 1.1: Are there any easily identifiable patterns in the **extent** of extramural English within the individual student groups, across the student groups or relating to gender differences?*

*Research Question 1.2: Are there any easily identifiable patterns in the **types** of extramural English within the individual student groups, across the student groups or relating to gender differences?*

Research Question 2: Are there any easily identifiable patterns, primarily correlations, between the amount of EE and in-school achievements, within the student group as a whole or relating to gender differences?

As mentioned, Chapter 2 provides a presentation of the background theories relevant to the research questions presented. The research design is outlined in detail in

Chapter 3 along with data collection, procedures and other considerations. Chapter 4 holds the central elements in the thesis combining both the results and their discussion. Finally, didactic implications and suggestions for future research are presented in Chapter 5.

Chapter 2: Theoretical Background

2.1 Introduction

The present thesis is interested in a number of different elements and as such draws on insights from several theoretical research fields, each of which will be addressed in this chapter. These theoretical research fields have been grouped into two main sections: language learning and acquisition (Section 2.2), and extramural English (Section 2.3). These two sections are by no means independent of one another.

Central to the Language Section 2.2, are theories on *second language acquisition* (SLA) since they transcend all aspects of the Master's thesis and as such will be addressed first. Theories concerning vocabularies, as well as practises in teaching and measuring lexical knowledge are also discussed in the context of the research questions presented in the introductory chapter.

The Extramural-English Section 2.3 reviews the literature detailing extramural English as a concept as well as the empirical studies that have been carried out. Benson's (2011) *learning beyond the classroom (LBC)* and Sundqvist's (2009) *extramural English (EE)* are considered key works in this context. From EE, there is a natural progression into *multiliteracies*, since they are one of its key features. Lastly, *gender* is discussed since it is integral to all three research questions. The chapter concludes with a summary in which some of the pedagogical and didactic implications that have been flagged up by various researchers in these fields, are discussed.

2.2 Language Learning and Acquisition

2.2.1 Secondary Language Acquisition

According to Liu (2015), SLA theories can be grouped into three categories: linguistic theories (e.g. innatist models), psychological theories (e.g. behaviourist and cognitive models) and sociocultural theories (e.g. social constructivist models) (see also Spada & Lightbown, 2010). However, as Menezes contended, of the “at least forty ‘theories’ of SLA that have been proposed”, none of them “present a thorough explanation for the phenomenon,” (Menezes 2013, p. 404).

Krashen's monitor model, which has been highly influential in SLA research, is seen largely as being an innatist theory and the second language (L2) application of Chomsky's (1968) universal grammar (UG) (see Spada & Lightbown, 2010). It comprises

five main hypotheses: the acquisition-learning hypothesis; the natural order hypothesis; the monitor hypothesis; the input hypothesis and the affective filter hypothesis (see Krashen 1982, 1985, 1987, 1988). Krashen (1981) believes that we have two independent ways of developing an L2, either through acquisition (subconsciously, picking up L2 through exposure) or through learning (consciously, through explicit, formal instruction) and according to Krashen (1985), learning is less important than acquisition when considering language development, a view that through the decades has been hotly debated (as outlined below).

Krashen's input hypothesis attempts to explain how language is acquired and suggests that learners acquire L2 by exposure to comprehensible input and the learner makes progress along the natural order as long as there is input which is one step beyond (+1) the learner's current stage of linguistic competence (i); comprehensible input, conducive to L2 acquisition, is, thus, according to the formula $i + 1$. Krashen believes that the learner uses a monitor, an inner language editor, subconsciously in order to produce spoken or written output. His research into L2 acquisition is therefore based on the premiss that "if input is understood, and there is enough of it, the necessary grammar is automatically provided" (Krashen, 1985, p. 2). In essence, his hypotheses assume the existence of a language acquisition device (LAD), which would analyse L2 input and ensure interlanguage development without conscious awareness on the part of the learner.

Menezes (2013) sums up Krashen's model as viewing "acquisition in a linear perspective which not only establishes a cause-and-effect relation between input and acquisition but also states that the grammatical structure is acquired in a predictable order" (p. 405).

Merril Swain was one of the first researchers to respond to and question Krashen's claim that learners can only benefit from comprehensible input. In the 1980s Merrill Swain played a dominant role in drawing attention to language production in the classroom and advocated the Output hypothesis (1985), later known as *lingualization* (Swain, 2006). She put forward the Output Hypothesis, arising from her work with immersion students experiencing content-based L2 French instruction in Canadian schools. She noticed that their productive abilities lagged behind their comprehensive abilities, which she attributed to lessons being dominated by reading and listening activities - championed by Krashen - whilst neglecting speaking and writing. She underlined that only productive output really forces L2 learners to undertake complete grammatical processing, and thus drives forward most effectively the development of L2 syntax and morphology. She further argued that the activity of producing the target language may push learners to become aware of gaps

in their interlanguage systems (see also Selinker, 1972) and problems in their current L2 system, a view supported by Schmidt (1990), outlined in more detail below. Swain proved that learners pay much more attention to input data, when they are desperately searching for a word or a phrase to express meaning in reaction to something they see or hear. Selective attention and self-directed hypothesis testing become key factors to learning and the retention of words and phrases.

Swain (1985, 1995, 1998, 2001) thus argued that learners not only need comprehensible language input as proposed by Krashen, but that they also need to produce output in order to develop their communicative abilities in the L2. This argument has been show-cased by a number of researchers, for example, Carrasquillo et al. (2004) who recommends the use of model texts as a starting point in writing assignments and thus links reading to writing, or input to output. Interestingly, studies interested in extramural English suggest that students who were involved in actively producing language extramurally became more proficient than those just using receptive skills (see for example, Sundqvist, 2009). This is certainly an area that merits more research in extramural English.

Schmidt (1990), as mentioned above, examined what role implicit and explicit learning had in L2 acquisition while reflecting on his own experiences of learning Brazilian Portuguese. Schmidt (1990) concludes that subliminal learning is impossible. He claims that in order for learners to convert input to intake, noticing is necessary and goes on to define *intake* as ‘that part of the input that the learner notices,’ (Schmidt, 1990, p. 139). Schmidt and Frota (1986) refer to “*noticing*” as a conscious awareness of the target language which requires the attendance and awareness of the learner to the input. Put simply, Schmidt believes that the frequency of a language form in the input did not result in acquisition if it was not noticed by the learner (Schmidt & Frota, 1986; Schmidt, 2001).

Nation (2015) also includes the concept of *noticing* relating to his “extensive reading and vocabulary learning conditions” (p. 136). He emphasized that vocabulary learning depends not only on the number of meetings with each word, but also on the quality of attention at each meeting and that studies suggest that in fact the quality of the meeting is more important than the quantity. He also goes on to say that the quality of the meeting depends on “whether the learner gives incidental or deliberate attention to a word” (Nation, 2015, p. 136). He differentiates between incidental and deliberate attention during extensive reading as such:

The quality of the meetings depends primarily on whether the learners give incidental or deliberate attention to a word. ... generally incidental attention occurs

when the learner's focus is on some other aspect of communication besides the individual words and phrases. Typically this focus would be on the message being communicated. Deliberate attention occurs when the learner consciously focuses on aspects of knowing a word. Both incidental and deliberate attention have various levels of quality, ranging across noticing a word, retrieval of knowledge gained from previous meetings, meeting or using the word in ways which are different from the previous meetings or use, and elaborating on knowledge of the word beyond. (p. 136)

Nick Ellis (1994, p. 216) similarly describes explicit learning as being characterized by a "more conscious operation where the individual makes and tests hypotheses in a search for structure," whereas implicit learning is the "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 (1990) underlines that explicit teaching can be useful given certain conditions for developing writing proficiency, wherein explicit teaching of a certain text type is combined with exposure to examples within that text type.

The *interactionist hypothesis*, presented by Long (1983) (see also Larsen-Freeman & Long, 1991) is at odds with Krashen's input hypothesis. They believe that syntactic structures are developed through conversation, and strongly believe that input alone is not enough to explain SLA. Menezes (2013) suggested that these *Interactionists* were "the first to view language not only as a matter of syntactic structures but also as a matter of discourse" (p. 505).

Long (1996) suggests that "negotiation for meaning, especially negotiation work that triggers interactional adjustments by the NS⁵ or more competent interlocutor, facilitates acquisition because it connects input, internal learner capacities, particularly selective attention, and output in productive ways" (pp. 451-452).

Gass and Mackey (2006) describe the interaction hypothesis as being "exposure to language (input), production of language (output), and feedback on production (through interaction)" (pp. 3-4).

Sociocultural theories place SLA in a larger social context, being interested in the social nature of all learning, including language learning (Spada & Lightbown, 2010). Sociocultural theory (SCT), based on Vygotskian ideas, claims that language learning is a

⁵ NS: Native Speaker

socially mediated process. Vygotsky, a Russian psychologist, became increasingly interested in the individual as part of a community and endorsed social interaction theory. He placed a social emphasis on language acquisition in particular.

Out-of-school English is often socialable, epitomised by the term *social media*. Multiplayer gaming is extremely popular and some activities are both novice-expert and peer-orientated. This social-cultural aspect of second language acquisition is therefore highly relevant. Vygotsky (1978) pointed out that instruction needed to be within a student's zone of proximal development (ZPD), within reach for the student but above their current level. Bruner (1983) referred to this instruction as *scaffolding*, where an expert – often a teacher – provides to a novice – often a student (p. 60). Lantolf (2000) amongst others has applied Vygotskian thinking to second language learning and the classroom and a number of studies have expanded on the original idea of the ZPD to include relationships amongst peer groups rather than just “novice-expert” relationships (e.g. Ohta, 2000, 2001). Ørevik (2015) drawing on Lankshear and Knobel (2007), pointed out that the ‘digital media space’ revolves around relationships and communities, but she underlines that, “digital skills as specified in the EFL subject curriculum are, however, connected to language learning and text production and to ethical and critical use of information sources, with no particular focus directed towards social and cultural aspects of the digital media space” (p. 118).

According to Krashen (1982), learners emotional state or attitude plays an important role in SLA by either promoting or impeding acquisition because it acts as an adjustable filter. A number of studies have pointed out that there is a strong correlation between the English proficiency of students and their out-of-school exposure to English and that this increase in proficiency is in part, linked to the increase in motivation (e.g. Piirainen-Marsh & Tainio 2009; Sundqvist 2009; Brevik, 2019). Hellekjær (2016) commented that many students lack motivation in-school because they are not able to make a connection between their out of school and inside school activities, a sentiment echoed by Bonnet (2004). According to Bailly (2011) “successful out-of-class learning depends on learners fulfilling at least three necessary conditions, or success factors: motivation, learning resources and learning skills” (p. 129).

In summary, Krashen's model is an important element in SLA theory, but it is often criticized for its lack of research evidence and moreover, the naturalistic, intrinsic or implicit approach to acquisition, that he himself has endorsed, is at odds with some of the more recent approaches outlined in this section.

2.2.2 *Vocabularies*

Evans and Green (2007) believe that students' academic literacy may be negatively impacted not only by an overall insufficient vocabulary knowledge, but also by a gap between their receptive and productive academic vocabulary knowledge. A clear correlation has also been found between "learners' lexical⁶ knowledge and their writing skills," (Henriksen & Danelund, 2015, p. 3), and as mentioned between knowledge of general vocabulary and achievement in L2 English, and knowledge of academic English lexis and academic achievement (see Skjelde & Coxhead, 2020). Vocabulary is therefore seen as a good predictor of language proficiency.

A central concept in vocabulary is that of the *word family*, referring to the base form and its inflections and common derivatives that share a common meaning, as outlined by Read (2000) (see also Nation & Meara, 2010). According to Nation (2013), high-frequency vocabulary consists of the 3,000 most frequently occurring English word families and gives 95% text coverage of spoken English (see for example Hestetraet, 2020). Different kinds of texts have different vocabulary loads. Nation (2006) found that 98% coverage is reached for newspapers, novels, and university-level texts at 8,000–9,000 word families plus proper nouns. Coxhead (2012) had similar findings for novels that might be read at the secondary school level (see also Coxhead & Walls, 2012).

Nation, (1990, 2001) also divides vocabulary in non-fiction texts into high frequency (or general service) vocabulary, subtechnical or academic vocabulary, technical vocabulary, and low frequency vocabulary. There is research evidence to support such a division and it is possible to typify each kind of vocabulary in a particular text or group of texts according to the criteria of frequency, coverage and range (Nation & Hwang, 1995).

West (1953) referred to high-frequency words as *general service vocabulary* (general service list GSL) because they were of use (or service) no matter what the language was being used to do. This vocabulary typically covers around 80% of the running words of academic texts and newspapers, and around 90% of conversation and novels. It includes virtually all of the function words of English (around 176 word

⁶ The mental lexicon is a complex phenomenon, and the exact nature of lexical knowledge has always perplexed researchers and teachers. This is not surprising as a lexicon can hold many thousands of words, each with numerous links of various kinds to the other words in the lexical network. Moreover, the links between different words are often difficult to explain clearly, thus making research into these links difficult. See for instance Schmitt (2014).

families), but by far the majority of high frequency words are content words (Nation, 2001). For learners with academic goals, the 570 word family Academic Word List (AWL) (Coxhead, 2000) is like a specialised extension of the high frequency words. It covers on average 8.5% of academic texts, 4% of newspapers and less than 2% of the running words of novels. This vocabulary has been called academic vocabulary (Martin, 1976; Csomay & Prades, 2018), sub-technical vocabulary (Cowan, 1974) or semi-technical vocabulary (Farrell, 1990). This vocabulary is common to a wide range of academic fields but is not considered as high frequency vocabulary and is not technical in that it is not typically associated with just one field. It is however more closely related to high frequency vocabulary than to technical vocabulary. The value of vocabulary in English for Academic Purposes (EAP), together with the students' need for support and which words students need to know has been much debated (see Nation & Coxhead, 2001; Malmstrom, 2017). Coxhead (2000) presented the AWL (Academic Word List) towards this end as did Gardner and Davies (2014) with their AVL (Academic Vocabulary List). The willingness to accept such lists varies across the research field (Nation, 2001).

It was thought by Nation, (2001), that the third level of vocabulary - technical words - covered about 5% of the running words in specialised texts, and was made up of words that occurred frequently in a specialised text or subject area, but did not occur or were of very low frequency in other fields. Technical vocabulary is largely of interest and use to people working in a specialised field. The fourth level of vocabulary consists of all the remaining words of English, the low frequency words. There are thousands of these words (Goulden et al., 1990) and they typically cover around 5% of the running words in texts.

According to Nation (2001), there has been little investigation of technical vocabulary and low frequency words. One of the reasons for this is that there has been little agreement about what technical vocabulary is and about how to count it reliably. Words were classified as being technical or non-technical words by rating them on a four point scale designed to measure the strength of the relationship of a word to a particular specialised field (Nation, 2001).

According to Nation (2001), problems occur for teachers when helping learners deal with technical vocabulary because they often lack a specialist knowledge of the learners' technical areas and field. Chung and Nation, (2003) believe that teachers nonetheless can play a small but useful role in preparing learners for coping with technical vocabulary. They say that this can be achieved by "helping learners gain the more general skills of recognizing technical words, interpreting definitions, relating senses to a core

meaning, and learning word parts. Teachers can provide learners with the tools for dealing with technical words and in this way teachers need not get involved in trying to teach in a technical area, but can direct their attention to vocabulary strategies” (p. 114).

Coxhead (2018) found in her study that the technical word list of plumbers was quite large and that this had implications for pedagogy in vocational English for plumbers. She suggested that plumbing word lists would help the students assess what stage their knowledge was at. She said it was important to check that learners recognise words in speaking and also in writing, so fairly simple dictation or word recognition tasks could be developed.

Whereas the General Studies English Curriculum stipulates that students should learn ‘academic vocabulary’, no such mention is made of it in the Vocational English Curriculum. In fact, a specific vocabulary has been omitted from the latter, instead stipulating that the students should be able to “listen to, understand and use terminology appropriate for the trade, both orally and in writing, in work situations”. The term ‘*fagterminologi*’ used in the Norwegian version, has not been translated by the Education Department to ‘technical language’ (see Coxhead & Demecheleer, 2018).

The Ministry of Education and Research (2019) based their understanding of vocational orientation on the Karlsen committee’s definition (Karlsen, 2008, p. 80), whereby vocational orientation, refers to the content, learning methods and vocabulary used in the teaching of the common core subjects, and should as far as possible have relevance in the individual’s vocational occupation. Befring’s⁷ (2015) FYR-based research involved interviewing Norwegian students taking vocational courses at upper secondary level, with the aim of finding out what the apprentices’ attitudes were towards the English they were taught in school, and to what extent it prepared them for their work life. She pointed out the need for relevant vocational content incorporated into in-school English (e.g. Befring, 2015). This idea is supported by Hua and Beverton (2013) who have also argued that English for Occupational Purposes (EOP) has a clear relevance to the learners’

⁷ Befring (2015, p. 6) presented Dudley-Evans & St John’s model which shows the sub-divisions within English for specific purposes ESP (Dudley-Evans & St John, 1998, p. 6). ESP is divided into English for academic purposes (EAP) and English for occupational purposes (EOP). EOP is further divided into English for vocational purposes (EVP) and English for occupational purposes (EPP). The latter relates to English needed in specific occupations that require further education at university level such as medicine, whereas EVP is a term that can be applied to upper secondary school vocational courses, as the students learn “Pre-Vocational English” whilst at school.

needs and thus help motivate the students making their learning more efficient and quicker. Berns et al. (2007) pointed out that the presence of English in the workplace has consequences for employers and employees alike with respect to productivity and profit for the former and employability and upward mobility for the latter, thus underlining the importance of GSL and EOP.

Of interest, are the types of English that are typically used in EE settings. One particular commercial website encourages gamers to use its site to learn what it terms ‘real English’ (REFG.com). It is not clear what they mean by *real English*. It’s certainly not a term found in the research literature. The site encourages people to play their favourite video games and learn English at the same time and writes that: “the goal of any English learner should be to use English outside the classroom for real communication – to enter the world of real English”.⁸ This does seem to align itself with the basic skills outlined by the Norwegian Ministry of Education and Research (2019) that underlines that students should “encounter authentic language models and interlocutors in English”.

If we ignore the fact that the site is demeaning classroom English, for the benefit of its own website, it does raise some interesting questions about how the English which is typically used extramurally is defined. It also recognises the importance that EE has towards improving English competence and interestingly, it actively encourages its users to *learn* English during this EE activity. It offers a link between the classroom and extramural activities and also provides some suggestions to help teachers make their students’ video-gaming time a learning experience. Perhaps this type of website is a taste of the future.

2.2.3 Teaching Lexical Knowledge

As Skjelde and Coxhead (2020) point out, there are a number of studies that have highlighted the increasing demand being placed on L2 English learners to have knowledge of academic vocabulary (e.g. Hellekjær, 2008; Opdal, 2017). Paradoxically, Skjelde and

⁸ The website describes English-language learning in terms of four rooms. Room 3, which is probably aimed at resembling a typical EFL classroom, is described as having advanced English with a teacher that uses English and is sometimes a native speaker. It goes on to say that the topics are often limited, lack ambition and do not have a fun element. Their Room 4, called *Real-world English*, is described as a room full of native speakers speaking fast, informal English on a limitless number of topics. This is their gaming room.

Coxhead (2020) suggest that findings from a number of studies focusing on Nordic upper secondary students, show that this knowledge of academic vocabulary is lacking.

Krashen (2009) believes that teaching in the classroom becomes less important as the pupil/student progresses if they can access comprehensible input outside the classroom. Schleppegrell (2004) agrees with Krashen insofar as comprehensive input leads to learning, but she goes on to point out that students rarely encounter academic language to the extent that they will learn it without the need for explicit teaching. It is important to consider that research studies have shown that extramural activities such as watching TV provides little exposure to academic words (Corson, 1997). Olsson and Sylven (2015) analysed students' academic vocabulary use based on four different writing assignments for each student, in their study. They concluded that their results suggest that extramural English does not necessarily increase the students' use of general academic vocabulary and go on to suggest that this may be because such academic vocabulary may be rarely encountered outside of school.

Fang et al. (2006) argued that it is now well recognized that students face challenges in coping with the language that is typical of school-based tasks (see Christie, 1998; Heath, 1983; Perera, 1982; Unsworth, 2001; Schleppegrell, 2004). Olsson, (2012) for instance found that students with frequent extramural activities were more proficient at writing letters as opposed to articles: a difference she attributed to their significant exposure to what she referred to as 'everyday informal language' (p. 132), which was more applicable to letter writing as opposed to articles requiring academic vocabulary. This is not surprising, given the fact that vocabulary learning is known to be one of the key challenges for EFL learners (e.g. Laufer, 1992), and academic vocabulary is known to be particularly difficult (Vongpumivitch et al., 2009). Vocabulary on the AWL as outlined by Coxhead (2000) is met infrequently and would entail an enormous amount of reading on the part of the students if they were to acquire the words as according to McQuillan and Krashen (2008: in response to Cobbs, 2007).

Schleppegrell (2004) believes academic language in-schools should be taught explicitly and pointed out that even students fluent in spoken English might lack the ability to read and write in the academic registers⁹. She went on to argue that the

⁹ In the context of schooling, *academic registers* represent those varieties of language that are characteristic of different school subjects and genres p.251 Fang *et al.* 2006, my emphasis). Shirazi (2010 my emphasis) outlines the following language features pertaining to *academic genre* based on Coffin et al. (2003 as cited in Shirazi 2010): (1) High lexical density: significant number of vocabulary items other than verbs; (2) Hedging and emphasising: modifying verbs and phrases; (3) Impersonal constructions:

introduction of more demanding academic texts, together with scaffolding, might increase the number of registers a student can access as well as enhancing the range within that access.

Cabot (2014) during his interviews with 5 students found that all of them underlined the importance of in-school learning for writing skills (p. 80). Lee and Muncie (2006), also attributed an improvement in production of higher level target vocabulary in post reading composition and lexical frequency profile (LFP) in their study group, was accorded to the teacher's use of interactive elicitation of vocabulary and a writing frame, and specific instruction to learners to use target vocabulary.

Horverak (2015) in her study of English writing instruction in an upper secondary school in Norway from a genre-pedagogy perspective, points out that studies such as Norris and Ortega (2000) have shown that for students using English as their L2, explicit instruction has generally been shown to be more efficient for improving writing skills than implicit instruction. She goes onto suggest that there is a need to focus more on English writing competence and writing instruction in Norway, in school and in teacher education. She also points to the worldwide studies that L2 writers of English “have more difficulty with organising material than L1 writers have. They also use more simple coordinate conjunctions and fewer subordinate conjunctions and lexical ties” (p. 4). She further points out that her findings had underlined the need that teaching students to recognise the distinctions between formal and informal language is something that needs to be prioritised and teaching students to avoid slang, contracted forms, incomplete sentences and too personal a style. This is an important finding in the context of extramural English, especially if studies find that a clear dichotomy exists in the types of vocabulary and language being acquired in extramural versus in-school settings.

Conversely, Warnby (2021) in his study of 817 Swedish upper-secondary students in university preparatory study programmes concluded that “extensive reading both of fiction and non-fiction, extensive viewing (preferably non-subtitled programs), and extensive gaming can support the acquisition of academic vocabulary” (p. 25). He found that reading is one of the strongest predictors, but at the same time is also the least popular activity amongst the learners. Interestingly, Warnby (2021) suggests that amongst his participants, “incidental learning during leisure time explains more of the academic vocabulary knowledge than do the years of EFL instruction” (p. 25).

subjects or agents of the clauses are often interpreted and identified via the usage of the context; (4) Highly nominal style: the clauses are densely packed with nouns rather than verbs.

Similarly, Sundqvist and Wikström, (2015), using the frequency of polysyllabic types (defined as words of three or more syllables) as an indicator, together with the *Compleat Lextutor VocabProfile tool*¹⁰ (see Section 2.6), showed that the frequent gamers in their study had the most advanced vocabulary in the study group, thus suggesting that explicit instruction from the teacher may not have been a factor in this instance. Some examples of advanced words used in their essays were ‘creation, furthermore, maturity, opportunities, resources, surrender and vehicle’. Language learning after all depends on language use. As Olsson, (2012) suggested, students exposed to significant levels of extramural English know language rules instinctively rather than through explicit learning and they are optimal monitor users being able to benefit from formal teaching. Interesting findings, but more research is needed. As Warnby (2021) points out, in general there is a distinct lack of research studies investigating a direct link between EE and incidental acquisition of English academic vocabulary prior to tertiary level studies.

Arguments and challenges aside, Nation (2013) underlines the usefulness of academic vocabulary, since it accounts for a substantial number of words in academic texts. He suggests using the four major strands of language learning in order to increase vocabulary knowledge¹¹, which are applicable to in-school settings, but could be considered for certain aspects of extramural English.

2.2.4 Measuring Lexical Knowledge

When considering a student’s lexical knowledge, according to Henriksen (1999) it should be thought of in terms of three continua: “partial to precise knowledge, shallow to deep knowledge, and receptive to productive knowledge” (as cited in Lee & Muncie 2006, p. 400). However, eliciting such information is far from straightforward.

As Milton (2009) noted, there is general disagreement amongst scholars in terms of which methods might be considered most suitable when measuring vocabulary knowledge. Similar disagreement is found when selecting indicators of writing proficiency. Polio (2001), when discussing the issue, pointed out that the standardized tests, levels in various language programs, and holistic measures available, each have their own set of problems. She goes on to describe the body of literature as ‘untidy’ since terms are defined differently, or not at all, and the reliability of measures is often not reported.

¹⁰ Used to generate an automatic count of tokens and types.

¹¹ Meaning-focused input; language-focused learning; meaning-focused output and fluency development (see Nation, 2013).

Holistic rating methods such as the test of written English, described in Reid (1993), looks at, as the name suggests, the overall quality of the written text. This should provide the most comprehensive assessment of written quality since it takes a blanket approach. However, it is not without its problems. Researchers (e.g. Hamp-Lyons, 1990) have shown that even trained raters have problems with consistency and pointed out that: “writing quality is not a simple construct, and until we arrive at scoring procedures that respect that fact we will continue to have both validity and reliability problems” (Hamp-Lyons, 1990, p. 80). Hamp-Lyons (2003) made the point that:

Because writing is a very complex activity involving thinking, planning, organising, linking as well as several levels of language manipulation (sentence and clause levels, as well as word and phrase level, plus spelling, punctuation, etc.), there are inherent problems with the expectation of reliability when viewed from the perspective of the **writing** rather than the perspective of the **rating**. The same person does not necessarily write equally well on different days or about different subject matter. (p. 163, Hamp-Lyons’ emphasis)

Other studies have used objective measures including: prepositions (Bakken, 2017); formulaic sequences, lexical diversity, lexical richness and lexical sophistication (Lemmouh, 2008; Bestgen, 2017); the appraisal system¹² (Martin & White, 2005; Olsson, 2012); text and average word length (Grant & Ginther, 2000; Olsson, 2012); lexical errors (Read, 2000); length of production at either the clausal or phrasal level, mean length of T-unit, mean length of clause, amount of coordination and amount of subordination (see Ortega, 2003); academic vocabulary use for rhetorical purposes (Csomay & Prades, 2018) and total words in error-free clauses (Ishikawa, 1995). So although a potentially interesting direction of study, it was deemed too time-consuming for this particular thesis.

Measuring productive vocabulary, in written form, however, seemed to be more straightforward. The vocabulary levels test (VLT), originally developed by Nation (1983) and later updated by Schmitt et al. (2001) is the most widely used measure of L2 lexical knowledge (Webb et al. 2017). According to Laufer and Nation (1995), the Lexical Richness Profile and their controlled-production vocabulary-levels test provides a reliable

¹² The appraisal system is concerned with “how writers/speakers approve and disapprove, enthuse and abhor... and with how they position their readers/listeners to do likewise” (Martin & White 2005, p. 1), thus functioning on the interpersonal level, depicting attitudes and engagement in the interpersonal exchange.

and valid measure of a student's lexical richness which in turn is a very good predictor of text quality. A number of studies have since used these profiles (e.g. Lemmouh, 2008; Crossley et al., 2010; Treffers et al., 2016). According to Webb et al. (2017), who introduced two updated VLTs, some years after they were first introduced, the biggest advantage of VLTs is that they indicate at which word frequency level the students should focus their learning. The tests themselves measure a student's ability to connect word form-meaning at four-word frequency levels.

Automated measures such as those used by Sundqvist and Wikström (2015), mentioned in Section 2.2.3, can give researchers, teachers, and test developers a valid assessment of the vocabulary in students' work. They are particularly important for those interested in discriminating between texts of learners of different levels of language proficiency (Treffers et al., 2016). This is because lexical diversity measures are often used as a general purpose measure of spoken and written language (Malvern et al., 2004) or as a measure of complexity at the lexical level (Housen et al., 2012). Language studies that use corpora exploit the computer's ability to count and sort words and sentences, even in large amounts of texts and provide the researcher with a quantifiable measure of certain indices. There are a number of different profilers available and there are various registers that can be used.

2.3 Extramural English

2.3.1 *Defining English in and Out-of-School*

Defining this in and out-of-school context is an important starting point and much less simple than one might imagine. The term *out-of-school learning* is used and defined by Lamb (2004), Yi (2005), Cabot (2014), Lai et al. (2015) and Garvoll (2017) and is similar to *out-of-class learning* used by Peters (2018) and defined by Benson (2001) as, "any kind of learning that takes place outside the classroom and involves self-instruction, naturalistic learning or self-directed naturalistic learning" (p. 62). Other terms that have been used include '*spare time learning*' (e.g. Ørevik 2014), '*online informal learning of English*' (Sockett, 2014) and '*unintentional learning*' (Forsman, 2004).

As mentioned in Section 2.1, Benson (2011) together with Sundqvist (2009) are considered key works in the context of the present thesis. Benson (2011) is one of the scholars that has contributed to theorising this field of research. He made an attempt to introduce some form of consistency and accuracy in the terminology used. He presented a useful discussion concerning the definition of classroom learning and what he refers to as

language learning beyond the classroom. He starts by identifying four major dimensions of language learning: location, formality, pedagogy, and locus of control as well as two key analytical constructs – setting and mode of practise. It is useful to discuss Benson’s four dimensions in order to develop a better understanding of the terms used within the present Master’s thesis. Interestingly, according to Benson (2011) ‘out-of-class’, ‘out-of-school’, ‘extracurricula’ and ‘extramural’ learning all focus on location or setting and usually imply something that is supplementary to classroom learning and teaching. He goes on to say that:

‘Out-of-class’ and ‘out-of-school learning’ are often used to describe non-prescribed activities that students carry out independently to broaden their knowledge of a subject, while ‘after-school’, ‘extracurricular’ and ‘extramural’ usually refer to additional programmes in school that are less formal than regular lessons and possibly organised by the students themselves. (p. 9)

This appears to be a slightly different understanding of the term ‘extramural’ that was first used by Sylven (2006) in the context of English outside of the classroom and later outlined in detail by Sundqvist (2009), who defined the term *extramural English* (EE) as:

In extramural English, no degree of deliberate intention to acquire English is necessary on the part of the learner, even though deliberate intention is by no means excluded from the concept. But what is important is that the learner comes in contact with or is involved in English outside the walls of the English classroom. This contact or involvement may be due to the learner’s deliberate (thus conscious) intent to create situations for learning English, but it may equally well be due to any other reason the learner may have. In fact, the learner might not even have a reason for coming in contact with or becoming involved in extramural English. (p. 25)

She went on to say that:

Contact with extramural English, or involvement in extramural English activities, is generally voluntary on the part of the learner. However, there is also the possibility that learners engage in specific extramural English activities because they feel pressured to do so, for example by their peers or parents. (p. 26)

Sundqvist and Sylven (2016) whilst outlining Sundqvist’s earlier definition, added that the term extramural English implies that contact and involvement with English is not

initiated by the teacher. Warnby (2021) in his later study of Swedish school children, similarly uses the terms *extramural* and also *intramural* English, for, out-of and in-school English respectively.

Returning to Benson's (2011) dimensions; the dimension of formality according to Benson refers to "the degree to which learning is independent of organized courses leading to formal qualifications" (p. 10). His qualification of the pedagogy of language learning beyond the classroom (LBC) is that the terms 'self-instructed', 'non-instructed' and 'naturalistic' learning contrast with 'instructed' language learning. He outlines that self-instruction and naturalistic learning lie at two ends of a pedagogical continuum that is situated beyond the classroom. He goes on to say that the term 'instruction' is "understood here as a particular kind of pedagogy, involving formal processes, such as sequencing of material, explicit explanation, and testing" (Benson, 2011, p. 11); and that language learning beyond the classroom does not necessarily imply the absence of tests and qualifications.

The terms 'independent', 'self-directed' and 'autonomous' language learning, according to Benson (2011), refer in wider usage to "who makes the major decisions about learning and teaching – the learner or someone else?" (p. 12). He goes on to say that non-classroom settings often demand that the learners make many of the decisions about their learning. The lack of a clear relationship between the locations of learning (in or out of class) and locus of control (self-directed or other-directed) is highlighted by Benson. He also makes a distinction between "instruction (for the narrower sense of knowledge transmission) and pedagogy (for the broader sense of the term)" (p. 16).

Van Lier (1988), defines the language learning classroom as 'the gathering, for a given period of time, of two or more persons (one of whom generally assumes the role of instructor) for the purposes of language learning,' (p. 47; cited in Benson, 2011, p. 8). Benson (2011) argued that one-to-one tutorials of, for example, a younger student being taught by an older student through private tuition can be regarded as 'out-of-school' learning in the context of location. According to Benson (2011), the locations in which language learning beyond the classroom take place are geographically anchored, but they are perhaps more usefully thought of as social spaces, or 'settings' for language learning. He defines setting as such:

An arrangement for learning, involving one or more learners in a particular place, who are situated in particular kinds of physical, social or pedagogical relationships with other people (teachers, learners, others) and material or virtual resources. (p. 13)

As Benson (2011) points out, if we assume classroom research is more narrowly concerned with conventional classrooms in educational institutions, then language learning beyond the classroom is considerably widened. He goes on to outline the term ‘mode of practice’ saying it broadly covers the ways in which aspects of formality, pedagogy and locus of control are actualized in settings. Benson (2011) defines it as “a set of routine pedagogical processes that deploy features of a particular setting and may be characteristic of it” (p. 14). As he points out, that:

Settings typically support a range of modes of practice: a classroom, for example, may support both teacher-fronted formal instruction, or less formal, student-directed task-based activities, just as a self-access centre might support individual self-directed use of self-instructional materials or group activities led by a teacher. (p. 14)

Giroux (1994) refers to the term ‘*public pedagogy*’ which has more recently been the focus of a handbook compiled by Sandlin et al. (2010), who describe it as asking:

Teachers, researchers, scholars, artists and theorists to decenter taken-for-granted notions of education, teaching and learning and raise important questions regarding how, where, and when we know education and learning... We hope these questions, and the critical analyses they require, will provide curriculum and educational workers and scholars at large with new ways of understanding educational practice, both within and outside of school.” (xxi-xxii)

Sandlin et al. (2010) write that public pedagogy concerns “informal spaces of learning such as popular culture, the internet, public spaces such as museums and parks, and other civic and commercial spaces, including both old and new social movements”. Benson (2011) believes that public pedagogy refers to the sense in which learners learning foreign languages are being ‘taught’ whilst independently watching television or using the internet.

Gee (2017) similarly believes that we need to move beyond the realms of the traditional classroom. He says that “we all have to begin thinking of space as a physical and virtual meld; begin dealing with spaces and groups as squishy and not well-bounded; and begin thinking in terms of attractors, affinity, affines, fellow-travelers, home-bases, and home-based clusters” (p. 28); he also points out that affinity spaces are not new, but now there are a “great many more of them” (p. 28). He believes that affinity spaces

“organize teaching and learning in quite different and deeper ways than do schools” (p. 27) and defines them as:

Generally, an affinity space is a place – virtual or physical – where informal learning takes place, where people are drawn together because of a shared interest or engagement in a common activity (see Gee, 2004, pp. 77-89).

The concept of *mucking around*, was introduced by Gee (2017) in order to emphasise the role that mucking around – similar to the concept of *play* introduced by Vygotsky - has in second language acquisition. Similar to Vygotsky’s (1978) concept of more capable peers in the zone of proximal development (ZPD), Gee (2017) also highlights the role of *surrogate teachers* and *mentors* within affinity spaces. He believes that these spaces can distribute knowledge much more effectively than a traditional classroom.

Video games, according to Gee (2017), can be clearly defined as ‘attractors’ to affinity spaces and can help in teaching and learning. Holm’s (2020) study of two English classes was interested in observing the teacher’s use of affinity spaces, associated with students’ English outside of school, in order to enhance their language learning in-school (see Brevik & Holm, 2022, p. 1). Brevik and Holm (2022) believe that “drawing on students’ language profiles allows the integration of affinity spaces into L2 teaching in a way that connects with students’ language learning outside school” (p. 10).

Benson’s (2011) detailed discussion together with concepts such as public pedagogy and affinity spaces, clearly highlight the difficulties in defining accurately English language learning both in the classroom and beyond the classroom. Furthermore, the ‘mural’ part of extramural and intramural, has to be considered in both physical and virtual spaces.

Another consideration, as Sundqvist touched upon in her doctoral thesis, is the concept of receptive versus productive language learning. Although the term ‘extramural English’ was introduced by Sundqvist with the intention of including both, the author of the present thesis found that the choice of vocabulary was fraught with difficulties. ‘Exposed to EE’ in my mind conjures up the image of a less productive input from the learner than ‘engaged in EE’, for instance. Also, the term ‘activity’ can have a number of meanings.

In summary, Benson’s attempt to introduce a rudimentary framework for describing, discussing and analysing language learning beyond the classroom is an

important starting point. It presents the salient points, encouraging consistency and accuracy in our use of terminology.

The present Master's thesis chose to adopt Sunqvist's definition of extramural English primarily because she has spearheaded an active group of researchers looking at extramural English in Sweden. Sweden of course, like Norway, is part of Scandinavia and there are many similarities in the patterns of extramural English between the two countries. Additionally, Sundqvist (2009) rigorously outlined extramural English in her doctoral thesis. Thus, the term *extramural English* and its antonym *intramural English* are used. However, it is important to recognise the complexities outlined in the discussion by Benson (2011) above and an acceptance that the term 'extramural English' is not without its difficulties. It should also be noted that other terms such as "out-of-class," 'out-of-school' and "in-class", 'in-school' are by no means discredited and are used synonymously with extramural and intramural.

2.3.2 Studies of Extramural English in the Literature

One of the most comprehensive international studies which included some aspect of EE encounters was outlined in Bern et al in (2007) (see also Hasebrink et al., 2007). The study involved 2,248 participants aged between 12-18 years old in four different countries: Belgium, France, Germany and the Netherlands. There were multiple aims, one of which included the exploration of the frequency, location and with whom the participants encountered English. The study summed up their extensive findings by identifying three important factors contributing to the omnipresence of English: the media, personal networks, and intercultural communication as it is exercised during vacations and travels abroad. They went on to say that the findings in the study had shown very clearly that "school is but one source of contact with English – and at least for some groups not the most important one". Adding that "the English used by learners is likely to be a mix based on English learned at school as well as English from lyrics, computer games, TV programs, and films" (pp. 126-127). They also pointed out that these findings would have substantial consequences for language teaching.

Studies have measured a variety of different extramural activities including film/TV, YouTube, music, gaming, reading books, newspapers, surfing the net, Twitter, Facebook, e-mailing, texting and blogging. Listening to English music has proved to be the most popular form of EE in a number of studies (e.g. Lamb 2007; Sundqvist, 2009, 2011) and online gaming, often in massively multiplayer online role-playing games

(MMORPGs), is seen by some to be ubiquitous (e.g., Crawford et al., 2013; Seo, et al. 2019).

Haugsbakken and Langseth (2014) outlined new emerging user patterns in students daily-use of YouTube and discuss its use as promoting an audio-visual literacy in a connectivist approach in the classroom. They studied a class of 15 students studying to become carpenters in year 2 in an English classroom setting. Seven out of the 15 students ranked YouTube as the most important site that they visited every day.

Watching TV and films also appears to be one of the most popular extramural activities (e.g. Sundqvist, 2009, 2011). Video subtitles were seen as being an aid to vocabulary recognition and overall comprehension by Winke, et al. (2010), since unfamiliar words appear in written form the same time as they are spoken and therefore raise awareness and they argued that using L2 subtitles whilst watching videos or films is beneficial. However, a study by d'Ydewalle and van de Poel (1999) investigating 327 Dutch children found that having the L2 in the soundtrack with subtitles in the L1 is the most beneficial for L2 vocabulary acquisition. The findings are interesting but remain largely unsubstantiated given the small amount of data collected (see Sundqvist & Sylven, 2016).

A number of previous studies in Norway have focused on those students who have high exposure to a specific type of EE. Some of these studies focused on so-called 'outliers' who were defined in such terms because of their higher scores in L2 (English) reading proficiency in comparison to their mother-tongue (Norwegian), attributed to extensive gaming (e.g. Brevik 2016; Garvoll, 2017). Other studies have also found a correlation between high exposure to gaming and high levels of English proficiency (e.g. Sylven & Sundqvist, 2012; Sletten et al., 2015).

Sylven and Sundqvist (2012) defined frequent gamers as 15-16-year-olds who spent 5 or more hours a week gaming. These studies found a positive correlation between the amount of time spent gaming and L2 reading proficiency and L2 vocabulary proficiency. They also found that boys spent much more time gaming than girls and that this was the suggested reason that the boys outperformed the girls in vocabulary tests. Garvoll (2017) described a typical gamer-profile as a 16-year-old, gaming for between 1 to 9 hours every day (p. 52). Both Brevik (2016) and Garvoll (2017) pointed out that the greatest benefit of gaming is the motivational factor since students have a desire to improve their English.

In their study of 230 Swedish students aged 16-19 years, Olsson and Sylven (2015) reported a number of interesting findings, amongst others that EE may be as influential as

CLIL instruction (*content and language integrated learning*, where school subjects are taught through the medium of a second or foreign language (L2), in this case English). The study compared students in terms of gender, and CLIL, using a background survey and web-based language diaries for data collection. EE activities included Facebook, Twitter, YouTube, e-mailing, gaming and films. They reported that males were engaged in EE on average 424.4 minutes a day and females 396.1 minutes a day, showing no significant difference. However boys were much more frequent gamers than girls. Comparing CLIL to non-CLIL students, the former spent 459 minutes per day and the latter 337 minutes per day on EE. Hellekjær (2008) similarly found that a small group of sheltered CLIL students, in his study of upper secondary schools in Norway, scored much higher in the IELTS Reading for Academic Purposes Module, than their EFL (non CLIL) counterparts. Hellekjære (2008) also found that exposure to reading, rather than TV and film, led to higher scores.

Forsman (2004) found that the differences in EE between Finnish teenagers, in the second year of their nine-year compulsory school, could be accounted for by student location: students in urban areas had higher level of exposure compared to their rural counterparts (51.10 and 36.70 hours a week respectively). She believed that this urban/rural divide was one of the most important factors affecting exposure to EE.

Brevik (2019) identifies three distinct profiles based on adolescents extramural English activities: *gamers*, *surfers* and *social media users*, which are defined in Holm (2020, pp. 14-15)¹³ and extended at a more nuanced level to include the *social media prosumer* (Ahmadian, 2018).

Sundqvist and Sylven (2016, see p. 139) introduced the concept of an extramural house, wherein the first floor and second floor are defined by the activities that take place there. A higher level of English competency is required in order to reach the second floor which involves activities such as reading books and gaming online.

¹³ *Gamers*: Predominantly boys who identify as frequent gamers due to their online gaming (typically three to eight hours per day). They use mainly English to read and respond to in-game instructions and to participate in oral and written chat with a network of Gamers. On their own or with others, they engage in quests, solve problems, and learn gaming strategies (e.g., YouTube tutorials).

Surfers: Predominantly boys – but also some girls – who are moderate gamers (less than three hours per day) and who identify as internet Surfers due to the extensive amount of time they spend online to find authentic sources of information, mainly in English (e.g., YouTube instructions), actively surfing looking for opportunities to use English.

Social Media Users: Predominantly girls who are non-gamers (but typically have gamed before) and identify as Social Media Users due to their engagement with English through social media platforms and media-service providers (e.g. Netflix), binge-watching several episodes of a series in one sitting.

Sundqvist (2009, 2011) found in her study of 80 Swedish students from three different schools, aged 15-16 years old, that oral proficiency and vocabulary correlated positively and significantly with the total amount of time spent on extramural English with respect to the boys¹⁴. Conversely, the girls showed a negligible correlation between EE and oral proficiency/vocabulary and the results therefore showed a clear difference relating to gender.

Sylvén and Sundqvist (2012) found that there was a correlation between digital game playing and English proficiency, whereby those students gaming for more than 5 hours a week scored higher on vocabulary tests. This resonates with findings by Sundqvist and Wikström (2015). Such studies have put forward a number of factors that might be responsible, including the opportunities for interaction in the L2 (Sylvén & Sundqvist, 2012), the inclusive nature and support offered within the gaming environment (Reinders & Wattana, 2011), exposure to new vocabulary (Rankin et al., 2006) and motivation (Reinders & Wattana, 2011). Qasim (2021) similarly suggests that the findings in her study of 88 Pakistani high school students “show a consensus on the positive role of video games in incidental vocabulary acquisition due to the pressure-free context, increased attention and engagement, and transition from incidental learning to incidental self-directed learning” (p. 206). Sletten et al. (2015) were interested in finding out the relationship between gaming, in-school achievements and training effort associated with a sports club. Interestingly, amongst other findings, the study found that increased gaming had a positive effect on the students’ in-school achievements in English.

Reading, as well as watching TV or movies, was an important extramural English activity for vocabulary size according to Olsson (2012) and Pearson (2004). The latter investigated the effect of language proficiency on extramural English learning strategies.

At the tertiary level of education, Busby’s (2020) study, based on 189 Norwegian university students, investigated variation in receptive L2 English vocabulary in relation to their field of study and exposure to English, both within and outside of formal education. Interestingly, extramural exposure to English was found to be a stronger predictor of vocabulary scores than formal English education.

As mentioned in the introductory chapter, a number of studies have shown that a significant number of students give little credit to their in-school English in terms of their

¹⁴ The correlation between extramural English and the Oral Proficiency grade was strongly positive and statistically significant ($r_s = .515$). The correlation between extramural English and vocabulary was even stronger ($r_s = .590$).

acquisition of English. Bonnet (2004) pointed out that only 13% of participants in the report, rated English lessons as being important to their knowledge of English, whereas media, books, gaming and even reading textbooks were rated by more of them as ‘very important’. Henry (2014) also reported that more than half of Swedish 16 year old students believed they were learning more, or at least as much English outside of school than from school lessons, and 16% reported believing that they had learned nearly all of their English outside of school. Busby (2015) found that 30% of Norwegian students felt that their school English lessons had not prepared them for the English they encountered at university and some of Pearson’s (1994) informants also reported that extramural English was more efficient than in-school teaching in their language learning.

2.3.3 *Multiliteracies*

A number of studies have reported a lack of reading amongst students in their EE study group (e.g. Sundqvist, 2009, 2011; Olsson, 2012; Warnby, 2021) as well as a preference for reading digital sources rather than analogue (e.g. Peters, 2018; Busby, 2020; Warnby, 2021), see also (Ørevik, 2020). Of the 189 university students in a study carried out by Busby (2020), 97% reported reading in L2 English on-line every week (88% every day), while the same figure for reading books was 33%. Peters (2018) found that 1.3% of the 137 respondents in her study, read books or journals/magazines a few times a week or more often, whilst, when asked about visiting websites written in English, the figure rose to 46.8%. Warnby (2020, as cited in Warnby 2021) reported similar findings in his study of 62 upper-secondary students and suggested that there was reason to argue, therefore, that young L2 language learners spend much of their time reading English in the *digital wild*, a term introduced by Sauro and Zourou, (2019) which they define as a space that “asks us to look beyond contexts directly embedded within or linked to formal and highly familiar educational institutions and practices” (p. 1). As Ørevik (2015) candidly pointed out, we are asking our students to straddle two text paradigms, the in-school book space, typified by the ESL curriculum and the digital media space, typified by out-of-school English.

In light of this modern day interaction with multiple modes of communication in digital or visual media, discrepancies between classroom and extramural environments have been highlighted. Led by the New London Group’s seminal pedagogy of multiliteracies in 1996, there have been many calls for a re-evaluation of definitions and pedagogical approaches to communication and literacy in the classroom (e.g. Skulstad, 2009; Kuure, 2011; Elsner & Vierbrock, 2013; Habegger-Conti, 2015). Lankshear and

Knobel (2006), defined literacy in relation to discourses as “socially recognised ways of using language (reading, writing, speaking, listening), gestures and other semiotics (images, sounds, graphics, signs, codes), as well as ways of thinking, believing, feeling, valuing, acting/doing and interacting in relation to people and things...” (p. 3). They also point out the discrepancy between learning practises in the classroom and out-of-school.

There have been a number of studies investigating the multimodal¹⁵ perspective in the English classroom (e.g. Jewitt, 2002; Kress et al., 2005; see also Ørevik, 2020 and Diamantopoulou & Ørevik, 2022), including the use of graphic novels in the EFL and EAL classrooms (e.g. Beenfeldt, 2016; Rimmereide, 2022), as well as semiotic resources of the teacher (e.g. Victor, 2011).

Kress (2003) helps us to interpret this paradigm shift in literacy as a shift from “reading the world as told” to “reading the world as shown” (p. 17). This is echoed by Unworth and Chan (2009) who pointed out: “Because images are being used increasingly in a complementary role to words in representing the meanings central to a text, it is no longer adequate to consider reading simply as processing information in print” (p. 245).

Digital media such as Webpages seldom limit their content to linguistic semiotic resources to convey their content. Instead, they rely on both static and dynamic images, perhaps music as well as interactive links. Language has traditionally carried the brunt of the semantic load - compared to other semiotic resources - within in-school English environments in the form of course books (*lærebøker*) and this has led to some researchers suggesting that in-school English is irrelevant and course books should be laid aside in favour of more varied literature that students find interesting (Hellekjær, 2016).

Afflerbach and Cho, (2009, p. 81) pointed out that when reading hypertext online, the reader encounters layers of ‘possible links, possible texts, possible decisions and possible interactions’ and therefore readers need to develop online comprehension strategies. It is clear that even proficient readers with satisfactory reading strategies for single and static texts, experience the interaction with the online text as more demanding and complex (e.g. Afflerbach & Cho, 2009; see also Lund, 2009). This is an important consideration if students are using multimodal texts during English assignments, both

¹⁵ The term multimodal text is understood as print based, visual or digital texts “that utilize more than one mode or semiotic resource to present meaning potentials, where mode is defined as a socio-culturally shaped resource for meaning making” (Serafini, 2015, p. 412). The five semiotic modes; linguistic, visual, audio, gestural and spatial, work separately and together to convey multimodal and literary meaning in a fictional, print text.

extramurally (often as part of homework) and intramurally, or as part of their more sociable extramural-English-exposure.

2.3.4 Gender Differences

As outlined in Section 2.3.2, studies looking at extramural English have shown gender differences. For example, a number of studies have reported that boys have heavier media contact than girls and they tend to play more video games (e.g. Sylvén, 2004; Sundqvist, 2009; Garvoll, 2017; Brevik, 2016; Olsson, 2012).

A summary of the findings from PISA 2018 show that there is a gender gap in reading abilities across OECD countries, wherein girls are consistently out-performing boys on reading assessments. Of concern is the fact that Norway has one of the widest gender gaps (see Borgonovi et al., 2018). According to the report, boys also report a lower level of reading for pleasure than girls. One of the leading factors associated with the gender gap is boys' disengagement from learning and suggests more specifically that one of the causes of the gender gap in reading skills may be linked to boys limited time spent reading outside of school.

They suggest providing students with engaging and accessible reading materials is important to improve interest in reading and literacy skills. Amongst other things they suggest providing reading materials that are in line with their hobbies and interests, such as the *Premier League Reading Stars* materials in England. This suggests that information on EE could prove useful in efforts to narrow the gender gap.

2.4 Chapter Summary: Pedagogical and Didactic Implications

Studies show that students have a tendency to engage in extramural English activities that use what the REFG site describes as 'real English', although there appears to be no clear definition in the literature of the types of English students use in EE settings. Some researchers have suggested that the best response to students' EE involvement, would be to change the school's expectations for the kinds of language used in school. After all, one of the aims in the core element of communication is that "the teaching shall give the pupils the opportunity to express themselves and interact in authentic and practical situations" and the basic skills section of the curriculum stipulates that students should "encounter authentic language models and interlocutors in English" (Ministry of Education and Research, 2017, 2019).

Academics such as Crookes and Schmidt (1991) have called for consideration to be given to extracurricular level activities when planning lessons (cited in Dörnyei, 2001). Brevik (2017) and Sylven and Sundqvist (2016) underline the importance of teachers finding out what the extramural activities of their students are and Ørevik (2020) also points out that “ICT has challenged established classroom practises and paved the way for new didactic approaches to language learning” (p. 166). A sentiment similar to those of Hellekjær (2016), who laments the state of in-class teaching and untapped potential of out of school English.

The new curriculum also demands in its aims that students should have the “opportunity to discuss and reflect on the form, content and language features and literary devices in different cultural forms of expression from different media in the English-language world, including music, film and games” (Ministry of Education and Research, 2019). Digital technologies offer the possibility of exposing students to such authentic experiences in the classroom (see Ørevik, 2020).

Warnby (2021) encourages the enhancement of the chances for students to get involved in activities offering incidental learning of academic lexis in intramural settings. He suggests extending this concept to beyond the classroom as well, outlining that curricula guidelines could include “more principled instruction with regard to academic vocabulary learning showcasing the incidental vocabulary learning possibilities stemming from extensive extra- as well as intramural language involvement” (p. 25). These arguments will be revisited in the concluding chapter.

Chapter 3: Methodology

This present Master's thesis chose to extend its research area beyond the classroom walls, including both an **extramural** and **intramural** element. As such, during the planning of this study, a number of research designs and methods were considered, and the rationale for their selection or rejection is presented in Part 1 of this chapter, together with the selection of study area and participants. Part 2 discusses the role of teacher as a researcher and the ethical considerations that this entails, followed by Part 3 that gives a detailed account of the procedures used for data collection and analysis. Finally, Part 4, outlines the quality of research and possible limitations.

3.1 Rationale

3.1.1 *Research Design*

3.1.1.1 Mixed Methods. The scientific model has been prevalent in education research for a number of years, being largely dominated by empirical enquiries (Pring, 2015). Some see this scientific model and its use of quantitative methods as being laden with generalisations and thus wholly inappropriate for the classroom environment. Instead, they champion the 'phenomenology' of the mind focusing upon individuals, through the use of qualitative methods (Pring, 2015). Contrarily, others argue that the latter is far too idiosyncratic. Much educational research transcends this simple dichotomy. Social scientists for example, have traditionally labelled data along crude lines into data that involves counting or measuring (quantitative), as opposed to all other data that involves anything else (qualitative), much to the perplexity of Gorard (2012). Studies on reading proficiency and vocabulary size, for example, are typically quantitative (see Polio, 2001) and students' responses to literary texts or feedback on their text production are typically qualitative methods, used in language didactics. Some social scientists whilst advocating one or the other, also believe that these two 'Q words' (ie. quantitative and qualitative) have many purported differences and require a completely different logic applied to their use and as such do not agree with the mixed methods approach which combines them (detailed below, see Gorard, 2012).

However, there are those such as Gorard (2012 p. 5), who laud the spirit of compromise and point out that quantitative and qualitative methods are not incommensurable, and classifications should not become schisms. This move towards a

‘mixed methods’ future, advocated by Gorard, seems inevitable, since as Creswell and Plano Clark (2018) point out, qualitative research is now accepted by educational researchers alongside its long-established quantitative counterpart. Indeed, this ‘mixed methods’ approach has gained momentum in educational research in recent years and attained the accolade of being defined as the “new star in the social science sky,” (Creswell and Plano Clark, 2018, p. 564). It seems therefore that these two ‘worldviews’ have gone beyond the flirtatious phase and are now positively embracing one another. Indeed, according to Molina-Azorin and Feters (2017) “Education was the top field (n = 41, 33%) among empirical papers published in the first 10 years (2007–2016) of the *Journal of Mixed Methods Research* (as cited in Shannon-Baker, 2022, p. 1) and quantizing¹⁶ data remains a popular approach in educational research (Shannon-Baker, 2022). Furthermore, mixed methods was the dominant research design used in the doctoral studies in English didactics in Norway in the last 30 years, as revealed by Rindal and Brevik, (2019).

Mixed methods, simply put, is “a procedure for collecting, analysing, and “mixing” both quantitative and qualitative methods in a single study...to understand a research problem” (Creswell and Plano Clark, 2018, p. 565). This is perhaps immediately appealing. However, there are careful considerations that should be adhered to before selecting this approach. Creswell (2013) points out, with respect to research approaches in general, that a mixed method approach is often more time consuming and requires a more widespread use of different procedures. The researcher should therefore ask themselves whether this approach will provide a better understanding of the research problem, in order to merit its use. It is also important that these two ‘strands’ - as Creswell (2013) refers to quantitative and qualitative methods - are integrated to some degree in the same study, rather than being two separate entities. Gorard (2012) with a much less cautious approach, says:

If a researcher really cares about finding something out that is as robust as possible, they should consider ignoring the traditional two-camp research methods resources and behave in research as they would in real life. In real life, the use of mixed methods is natural – so natural, in fact, that we do not generally divide data in the first place.” (p. 12)

¹⁶ Quantizing refers to the numerical conversion, translation or transformation of qualitative data.

A number of other researchers also argue that quantitative data alone is insufficient in education research and a qualitative element is needed and that the mixed-method approach allows researchers to conduct multilevel research and implement unique and multilevel approaches to integration (see Shannon-Baker, 2022).

3.1.1.2 Case Study. A design that embodies the mixed methods ethos is that of case-study research, being unique in comparison to other qualitative approaches, in its allowance of the collection and integration of quantitative survey data. In case study methodology, data from these multiple sources are then converged in the analysis process rather than being handled individually. According to Crowe et al. (2011), case-study research is more appropriate when the researcher wishes to obtain a more naturalistic understanding of an issue. Furthermore, Yin (2003) suggests that case studies can be used to explain, describe or explore phenomena in the everyday contexts in which they occur and therefore this approach lends itself well to capturing information on more explanatory 'how', 'what' and 'why' questions. In summary, Yin (2003) provides a clear definition of the case study research methodology as an “empirical inquiry that investigates a contemporary phenomenon within its real-life context, when the boundaries between phenomena and context are not clearly evident, and in which multiple sources of evidence are used” (p. 23). It is in essence a research approach whose central tenet is the need to explore a phenomenon in depth and in its natural context.

The present thesis resonates with many of the sentiments outlined by Yin and Gorard. It sets out to explore and describe EE in the students' everyday setting in order to answer how and what questions, using a mixed methods approach. The primary phase of data collection involved a significant amount of numeric data which provided information on EE activities and in-school achievements, but also included non-numeric elements. For instance, the questionnaire included open-ended questions as well as questions with predetermined categories and scales. This adheres therefore, in part, to the intent of the convergent design which is to “obtain different but complementary data on the same topic” in order to best understand a research problem (Creswell and Plano Clark, 2018, p. 68).

Interviews, as a follow-up to the questionnaires, were part of the initial research design planning, since Creswell and Plano Clark (2018) pointed out that using this approach means that qualitative data could be collected “in order to explain quantitative significant, or nonsignificant, results, positive-performing exemplars, outlier results or surprising or confusing results” (p. 77). In short, it allows the researcher to explain the

mechanisms through qualitative data that shed light on the quantitative results and how they might be explained. Furthermore, a qualitative strand can fill in details which provide a richer account of the object of inquiry. This qualitative element played a more significant role in the latter stages of the study and as such an explanatory sequential design as outlined in Creswell and Plano Clark (2018, p. 65) was used.

Ethnography involves the description, analysis and interpretation of a culture-sharing group's shared patterns of behaviour, belief and language and it aims to capture the 'rules' of behaviours (see Creswell, 2014, p. 490). This study touches on ethnographical research, but it is not a central element in its design.

Stake (1995), whose work has been particularly influential in defining the case study approach, characterises three main types of case study: intrinsic, instrumental and collective. In part this study resembles the instrumental case study which uses a particular case to gain a broader appreciation of a phenomenon, in this case extramural English.

Since the methodology in the present study embraced the '*teacher as a researcher*' role, consideration was given to its adherence to the *action research* method, since teacher as researcher is an integral part of that methodology. However, since the present thesis has an exploratory flavour rather than an interest in the development of a specific didactic issue and additionally, was not undertaken in order to reflect on and develop my own "practise of taking action" (Creswell, 2014, p. 609), this study does not adhere as such to the action research design. However, the role of teacher as researcher is central and therefore discussed further in Section 3.3.

This research is therefore essentially explanatory sequential design with elements of convergent design, touching on case study design, using a mixed methods approach, with a quantitative priority.

3.1.2 Choice of Participants

The target population was upper secondary school students who were learning L2 English, which depending on the course could be years 1, 2 or 3. For convenience and logistical considerations, the study place selected was the school where I work. The school, offering multiple programmes, presented the possibility of selecting students taking a variety of classes: general studies, vocational studies, specialised studies (International English) or Technical and General Studies (TAF): my school is one of the

relatively few schools in Norway that offers the latter. TAF/YSK¹⁷ provides students with the opportunity to achieve a Specialised General Certificate of Education as well as a Leaving Certificate of Apprenticeship within a four-year study course. The students also spend a few days a week in the workplace, firstly on work placement and later an apprenticeship. This presented the opportunity to procure information on EE in a variety of settings, including the workplace and as such this class was selected for my research. Since there is just one TAF class each year, and I was the assigned teacher in that class, I naturally assumed the role of teacher as a researcher (see Section 3.3). TAF classes, at the time, included students within three different vocations: Mechanics, Marine and Health.

The sequence of research is outlined in more detail in Section 3.2. The first phase of data collection started in 2017 and continued into 2018 (Set A). However, since this initial sample was relatively small and below the 30 threshold outlined by Creswell (2014) for correlation studies that relate variables, an additional add-on to the initial application was sent to NSD asking for permission to use the same research design methods on the following TAF1 class in 2018 and 2019 (Set B). Permission was granted and data was subsequently collected from a second class in the aforementioned period. Thus the project had two study or class sets: A and B (see Table 3.1), equivalent to school years 2017/2018 and 2018/2019 respectively.

Table 3.1

Participants Divided into Sets and Case Study Subsets

Group	Name	Group size
TAF class, in their first year at upper secondary school, school year 2017/2018	Set A	25 students
TAF class, in their first year at upper secondary school, school year 2018/2019	Set B	17 students
Case-study from Set A	Subset Aa	6 students
Case-Study from Set B	Subset Bb	5 students
Set A & Set B combined	Set AB	42 students
Subset A & Subset B combined	Subset AaBb	11 students

Note. For the purposes of this study the two classes have been assigned identification tags. In both study sets, the students' ages were between 16 and 17 years old.

¹⁷ TAF and now known as YSK. TAF is an acronym for *tekniske allmennfag*. YSK is an acronym for *Yrkes- og studiekompetanse* (vocational and general study competence).

Sets A and B combined were assigned the label Set AB. Analyses on this set were applied to the set as a whole and not simply the average between the two sets.

3.1.3 Case-Study Subsets Aa + Bb

As mentioned in the rationale section that opened the chapter, a case-study method was used in relation to the subsets Aa and Bb. These subsets were selected in order to provide a more in-depth understanding of the phenomenon extramural English. Students in both classes were asked to volunteer to fill in language diaries. They were promised a clearly defined reward for their participation: they could choose a book from Amazon UK with a value of up to £25. Seven students volunteered in both Sets A and B, amounting to 14 students. Three of these were subsequently discounted because they failed to fill in the required number of days or their data was erroneous, but this still left 11 language diaries that could be used.

3.2 Procedures

3.2.1 Sequence of Research

As outlined in the *Rationale Section* of this chapter, the research was sequential over an 18 month period, with a number of different elements being applied (see Table 3.2).

Table 3.2

Sequence of Research

Date & Procedure	Study Group	Data tool	Aims to measure	Method of analysis
2016/2017 Pilot study Results not presented here	International English 14 students.	Questionnaire, Language diaries, Vocabulary tests Hasselgreen (1994) vocabulary tests	EE	Quantitative Qualitative
Winter 2017/2018 Application to NSD Consent letters to school and intended participants				
Spring 2018 Primary data collection from Set A	TAF 26 students	Questionnaire see 3.2.1.1 Vocabulary tests Two written texts Scores from proficiency test, Spring mock exam and in-depth project	Background info. EE Language proficiency Views on English	Quantitative Qualitative
Spring 2018 Secondary data collection from Subset Aa.	TAF 6 students	Language Diaries see 3.2.1.2	EE	Quantitative Qualitative

Autumn 2018				
Second application sent to NSD asking for an extension to the study.				
Spring 2019	TAF 17 students	Questionnaire 3.2.1.1 Vocabulary tests	Background info. EE	Quantitative Qualitative
Primary data collection from Set B.		Two written texts Scores from proficiency test, Spring mock exam and in-depth project	Language proficiency Views on English	
Spring 2019 Secondary data collection from Subset Bb.	TAF 5 students	Language Diaries see Section 3.2.1.2	EE	Quantitative Qualitative
2018-2019 Secondary data collection from Subsets A + B.		Interviews see Section 3.2.1.5	EE Views on English	Qualitative
Autumn 2019, 2020 Data analyses	TAF 42 students		Descriptive statistics Frequencies Correlation	Quantitative Qualitative
Spring 2020 Reapplication to NSD based on their new rules and regulations				

As shown in Table 3.2, a short pilot study was carried out during the school year 2016/2017, the participants of which were an International English class of 14 students that I was teaching at the time. The aim of the pilot study was to explore different research methodologies for the subsequent (present) Master’s thesis. No application was made to NSD because there was no intention of publishing the data. Out of courtesy, consent was secured from the students themselves, however, and the school. The students were presented with a questionnaire, language diaries, vocabulary tests and a lexical teddy bear test¹⁸ (Hasselgren, 1994), see Appendix C.

3.2.1.1 Questionnaire. A questionnaire was designed, in part, based on previous studies that have addressed similar research questions and used similar methods of data collection (e.g. Sylven, 2006; Sundqvist, 2009; Busby, 2015; Olsson, 2012; Garvoll, 2017) and using feedback from the pilot study (see Table 3.2). The questionnaire for the present study had a mixture of multiple choice and open questions. Open questions generated qualitative data, helping provide a more in-depth understanding of the respondents’ opinions.

¹⁸ Hasselgren (1994, p. 250) ‘lexical teddy bears’ – “core words [...] learnt early, widely usable, and above all safe (because they do not show up as errors)”. See Appendix C.

The questions can be grouped into 3 main categories: firstly, background information; secondly, extramural English and thirdly, in-school English. Other than gender, background information was not collected in order to use directly, but rather to help provide a detailed picture of a student's proficiency in English, where necessary. Sundqvist (2009, 2011) similarly collected this background information suggesting that information such as the number of books an individual has at home helps form an understanding of their 'cultural capital'. This information in turn could help explain any anomalies, or eliminate influencing factors from any data collected on extramural English. For instance, having a parent with mother-tongue English or a large amount of foreign travel might account for a relatively high grade in English as opposed to a high-level of extramural English activity.

The questionnaire was presented digitally through It's-Learning and it was made clear to the students that it was not obligatory. The questions were written in Norwegian in order to limit any misunderstanding from the students' point of view. Since the questionnaire was relatively long and detailed, the students were given plenty of time to fill it in. I also stressed the importance of reading the questions properly and answering truthfully and underlined that the validity of their results was important. As a reward the class was presented with a chocolate cake after they had all completed their questionnaires. All of the students chose to participate and completion rates were 100% in both sets.

The students in the two classes were given the questionnaire in the same period on consecutive years: spring of 2018 (Set A) and in the spring of 2019 (Set B), in order to minimize differences in extenuating circumstances, such as timetabelling, tests and the time of year. I was present whilst the students filled in the questionnaire digitally, to answer any queries, but was careful not to influence them in any way.

Question 30 was intended as the main source of data collection for EE, together with the recordings from the language diary. Question 8 was designed in order to find out about EE in the students' workplace. Question 35 in the questionnaire asked the students to indicate how much time they spent listening, speaking, reading and writing (LSRW) extramurally (see Appendices E & F).

Additional data from questions 22, 23-29, 34, 36-41, 47-49 and 50 from the questionnaire have also been included in the results and analysis because they add another layer of complementary information to both research questions 1 and 2 and they add meaning to the statistics. This information is useful in understanding the extra- and intramural relationship.

3.2.1.2 Language Diaries. As mentioned previously, students were asked to volunteer to write a language diary for at least 7 days. 7 days was chosen as a minimum because this would mean that a weekend, school and work days would be included. An explanation of the task was given to the students in written form and explained orally to them before they started filling in the diaries. All students in the same subset were to start their diaries at the same time to limit the number of independent variables affecting the results. Subset B filled in their diaries during the same month a year later. I also suggested to the students that they should try and fill in the diary as frequently as they could to avoid any recall errors. I stressed that accuracy was important if the results were to be valid. Students filled in their diaries in a Google document in Gskole. When completed, I downloaded the file and added it to my Master's database. Their files were assigned a student number rather than a name and the Code key being kept in a separate place, in order to protect the students' identities.

3.2.1.3 In-School Achievements. One of the aims of this study was to find out if the data collected supported the notion that extramural English exposure and activity can increase English proficiency levels as measured in-school and whether it highlighted any gender differences.

The raw data scores were used when analysing students' in-school achievements. In the case of the proficiency test, this was a score out of 150 and in the other assignments it was a percentage score.

All students at the school take proficiency tests (kartlegging) at the start of their first year at the school in English, maths and Norwegian, using Kartleggeren.no (see Appendix D). The proficiency test in English, provides comprehensive and detailed results of English proficiencies. The test is divided into 3 main groups: reading comprehension, writing, vocabulary, and further divided into: word picture, scanning, skimming, reading skills 1, reading skills 2, dictation, spot the error, synonyms, antonyms, foreign words and word choice (my translation¹⁹).

Additionally, the scores from the spring mock exam and in-depth project, in percentages, were included: the former because it tends to be a good indicator of the students' general language skills including vocabulary and the latter because this tends to

¹⁹ Ordbilder, skanning, skumming, diktat, skrivemåte, finnfeilene, synonymer, antonymer, fremmedord, ordvalg. See Appendix D.

be a good indicator of the students' oral as well as written ability, together with their grasp of technical vocabulary (vocational English). A final set of scores were attained using both receptive and productive vocabulary tests.

3.2.1.4 Vocabulary. Vocabulary tests developed by Nation (1983), Laufer and Nation (1999) and Webb et al. (2017) were elected for use in order to assess the students' vocabulary knowledge (see *Theoretical Background 2.2.4* and Appendix G). Vocabulary is widely recognised as a good indicator of language proficiency and provided another means of procuring numerical scores of students' in-school achievements. Each receptive word-level test is assigned a score out of 30 and productive tests a score out of 18.

The students took the receptive tests measuring: 1000, 2000, 3000, 4000, and 5000-word levels on the same day, generating significant amounts of data. The researcher had to grapple with the dilemma of using all of this data or selecting just a part of it for the purpose of the present study. Almost all of the students scored 100% on the 1000-word level so that was discarded since it revealed no differentiation between students. It was therefore a choice between the 2,000, 3,000, 4,000 and 5,000-word sets. The students struggled on the 3000-word level and ironically a significant number received a lower score than on their 4000 and 5000-word level tests. Additionally, a number of students scored higher on their 5000-word level than on the 4,000-word level. The data from the 2,000 and 4,000-word level tests showed the least deviation between the two levels for each of the students and were therefore selected because they seemed to give the most reliable and valid reading of students' achievements.

The vocabulary tests in which the students had to produce words was tested at the 2000, 3000, 4,000, 5,000, 10,000 and university word levels the following day. The 2,000-word level was selected so as to offer a direct comparison between receptive and productive vocabulary. The 4,000 and 5,000-word level tests were unfortunately not completed by a number of the students, who had to leave, because of other timetable commitments, so were discounted because they couldn't offer a comparison of the full study set. Although there was no equivalent available in the receptive vocabulary tests, the university level was selected in order to see if there was a relationship between EE and this level of vocabulary.

3.2.1.5 Qualitative Data. The secondary qualitative phase was conducted through interviews and recording any responses to open questions on the questionnaires. The interviews took two forms.

Firstly, as outlined above in Section 3.1.1.1, qualitative data can be collected “in order to explain quantitative significant, or nonsignificant, results, positive-performing exemplars, outlier results or surprising or confusing results,” Creswell and Plano Clark (2018, p. 77). Quick face to face interviews or queries sent via e-mail, were used towards this end and as such were not formally recorded. Participants were not selected but approached out of necessity: if something needed further elaboration or cross-checking for instance.

Secondly, two focus group semi-structured interviews (see Kvale, 2007) and a semi-structured interview with an individual were carried out and formally recorded. This data is not being presented or used in the present thesis.

3.3 Quantitative Data Analysis

IBM SPSS 25 & 27 programmes were used to analyse and graphically present all of the data, with Pallant (2016) and YouTube channel “Research by Design” (see Daniel, 2017) providing useful guidelines. Although data input is time-consuming, perhaps the biggest challenge with SPSS is selecting which analyses to carry out - hundreds are literally at your fingertips, some more applicable than others - and then interpreting the output created. Analyses were therefore chosen with respect to the following criteria: they were relevant to the research problem and they were statistically viable. Frequency analysis was carried out on variables selected which provided a detailed numerical account of the amount and types of EE. Creswell (2014, p. 164) determined that a sample size of 30 should be considered as the threshold for correlation studies that relate variables. Since the sample size of Set AB was 42 it was decided that correlation analyses could be carried out.

3.3.1 T-test

To compare the arithmetic means of two samples, a *t*-test was calculated using SPSS. A *t*-test is a type of inferential statistic used to determine if there is a significant difference between the means of two groups/samples. To carry out a *t*-test we need the difference between the mean values from each data set (called the mean difference), the standard

deviation of each group, and the number of data values of each group. In order to carry out *t*-tests, certain assumptions have to be met (see Maverick et al., 2021):

1. The first assumption made regarding *t*-tests concerns the scale of measurement. The assumption for a *t*-test is that the scale of measurement applied to the data collected follows a continuous or ordinal scale.
2. The second assumption made is that of a simple random sample, that the data is collected from a representative, randomly selected portion of the total population.
3. The third assumption is the data, when plotted, results in a normal distribution, bell-shaped distribution curve.
4. The final assumption is the homogeneity of variance. Homogeneous, or equal, variance exists when the standard deviations of samples are approximately equal.

There are different types of *t*-tests depending on the type of data being compared. An independent samples *t*-test (also called between-samples and unpaired-samples) compares the means for two groups and was used when comparing boys and girls. A paired sample *t*-test (also called a correlated pairs *t*-test, a paired *t*-test or dependent samples *t*-test) is used when comparing the same group at different times and was used when comparing group AB's receptive and productive vocabulary scores (see Daniel, 2017; Glen, 2022).

Both tests require the homogeneity assumption: the population variances of the dependent variable must be equal for all groups. The two samples therefore had to be tested for Test of Homogeneity of Variances²⁰: Levene's test on SPSS where population variances are *not* equal if "Sig." or $p < 0.05$ was used (Pereira, 2015).

When $p < 0.05$, the effect (in the case of the *t*-test, the difference between the groups on the dependent variable) is statistically significant, the null hypothesis can be rejected. In other words, the sample provides sufficient evidence to conclude that the means are different.

3.3.2 Correlation

Correlation analysis is used to determine the strength and direction of the linear relationship between two variables (usually continuous). Pearson (*r*) can also be used

²⁰ Other markers of significance include: if the T-score is above the critical value as seen at a 95% confidence level in a students' T-table and if the confidence interval does not cross zero (Daniel, 2017).

when one of the variables is dichotomous (e.g. male/female). Spearman Rank Order Correlation (*rho*) is designed for use with ordinal level or ranked data (Pallant, 2016).

Scatterplots were first generated for the datasets as suggested by Pallant (2016). This gives you a quick and simple visual of the relationship between the two numeric variables and can be used to identify a linear correlation. Pearson's coefficient (*r*) was then calculated. For those variables which did not meet the required assumption of Normal distribution, Spearman's rank coefficient (*rho*) was calculated in addition.

Pearson's correlation coefficient is a statistical measure of the strength of a linear relationship between paired data. In a sample it is denoted by *r*, wherein positive values denote positive linear correlation and negative values denote negative linear correlation and a value of 0 denotes no linear correlation. The closer the value is to 1 or -1, the stronger the linear correlation (see for example Weir, 2014).

The calculation of Pearson's correlation coefficient and subsequent significance testing of it requires the following data assumptions to hold: interval or ratio level; linearly related; and bivariate normally distributed. Variables were checked for normal distribution since Pearson's correlation coefficient is sensitive to skewed distributions and outliers. According to Weir, (2014), if data does not meet the assumption of bivariate normal distribution then Spearman's rank correlation should be used instead.

Normal distribution was checked using box-plots calculated on SPSS. If the box-plots flag up outliers then further checks should be made that absolute values of the skewness coefficients are less than two times their standard errors.

Point biserial correlation (PBS) is recommended when you are estimating correlation between nominal and interval/continuous variables such as gender and scores respectively, to calculate correlation. In most cases, a *p*-value of 0.05 (5%) is accepted to mean the data is valid.

“very strong” 0.80- 1.0

“strong” 0.60- 0.79

“moderate” 0.40- 0.59

“weak” 0.20-0.39

“very weak” 0.00- 0.19

(Evans 1996, as cited in Weir 2014).

Spearman's Rank is a nonparametric statistic and unlike Pearson's correlation, there is no requirement of normality. If there was any doubt then Spearman's Rank was used (Weir, 2014).

The calculation of Spearman's correlation coefficient and subsequent significance testing of it requires the following data assumptions to hold: interval or ratio level or ordinal; monotonically related. Spearman's correlation coefficient is a statistical measure of the strength of a monotonic relationship between paired data. The strength of the correlation is verbally described using the following guide for the absolute value of:

“very strong” 0.80- 1.0

“strong” 0.60- 0.79

“moderate” 0.40- 0.59

“weak” 0.20-0.39

“very weak” 0.00- 0.19

(Evans 1996, as cited in Weir 2014)

3.3.3 Language Diaries: Data Analysis

The students filling in the language diaries were able to supply a more detailed - and one would assume a more accurate - picture of their time spent using extramural English. The students noted down how many minutes they used on certain activities. A total score based on the total number of minutes during the week, could then be assigned to each student providing continuous ratio data. Immediately noticeable was the disproportionate amount of time students spent listening to music compared to the other activities. Where measures of EE were made, it was therefore decided to calculate two scores, one that included music and one that excluded it, due to the different degrees of listening that exist (see *Results and Discussion* 4.3.2.3). It was also decided to have a score that omitted homework alongside music. This was to minimise any teacher-influence in students' scores, since this was the most likely activity that students might have been tempted to over exaggerate in order to look favourable in the eyes of the teacher. If the students had a disproportionately high score on other applications such as Twitter, then I would, as far as was possible, double check with the student themselves, through short interviews (see Section 3.2.1.5), to see if they had been using English or Norwegian. This meant that some scores and diaries had to be discounted because the student was unable to clearly differentiate between their English and Norwegian use on them. This means that the total mean score should be considered a slight underestimate.

The number of days students filled in their diaries varied. In data Set A, there was a variation in response of 3 days, 7 days (3 students), 8 days, 11 days and 14 days. Therefore, the first seven days of the six students who completed seven or more days were used for the study. Data Set B saw a similar variation of 2, 3, 12 (4 students) and 13 days. The first seven days of the five students who had completed seven or more days were used, so as to tally with Set A. Three diaries had to be discarded because the students had recorded too few days or were unable to verify if they had recorded the data accurately.

3.3.4 Questionnaire: Data Analysis

The questionnaire comprised 51 Questions, some of these questions were multifaceted, including matrices and ranking. Ordinal, nominal and continuous (ratio) data were generated. Open questions accounted for some of the questions as a whole or part of. Set A and B were presented with the same questionnaire (see Appendix E).

Such a detailed questionnaire completed by all of the students in the AB study group, generated a large amount of data: too much for the present Master's thesis to present. As a result, for the purpose of this study the following questions from the questionnaire deemed most appropriate for the present thesis, were selected in order to provide a reliable and accurate picture of the type and amount of students' EE (see Appendix E): Questions 8, 30 and 35.

Additionally, the questionnaires also provided information on the students' views regarding extra- and intramural English. For this purpose the following questions have been selected from the questionnaire: questions 23-29, 22, 34, 36-41, 47-49 and 50 (see Appendix E). Likert scales were used and in this instance, results are presented as raw data in the guise of percentage of student response to each point/category.

Question 30 in the questionnaire gave the most data relating to research question 1 (see Appendix E). Question 30 utilized categorical, single-response options with numeric range labels rather than asking respondents to enter a specific value of EE, since the latter is too challenging. Midpoint coding was therefore used in order to calculate a mean value for each student. It is recognised however, that this is a crude measure of the mean (see Ali, 2022). Numerical midpoints were 0, 0.5, 3, 7.5. The last interval of >10 hours is rather arbitrary, but fortunately very few students selected it. It was assigned a value of 11.86 based on scores recorded in the language diaries (see Appendix E). An open ended question was included at the end because it was difficult to provide all of the possible categories that a student might want to tick off.

The categories e-mail and messenger were considered so similar that they were grouped together into one category when presented graphically and so too were blogs, Twitter and discussion forums. The biggest challenge was the Snapchat category, since the language diary recordings had roused a suspicion that some of the students, in a similar fashion, may have forgotten that they were recording English use on Snapchat and not general use including in Norwegian. Double-checking reinforced this suspicion in some cases and not others. It was therefore decided to omit this particular data from the main statistical analyses, but the data is presented in the appendices (see Appendix J).

The students were also presented with a variety of questions in the questionnaire in order to ascertain which of the four commonly recognised English skills they used the most. In question 35, they were asked to indicate how often they read or listened to English as well as how often they spoke or used written English. These were also combined to form two categories: receptive and productive. Receptive refers to reading and listening, and productive refers to spoken and written. The students were then asked how often they used English in these four different forms and this data was also converted to numeric scale coding data (see above) with numeric values of 0, 0.5, 3, 7.5 hours per week assigned respectively. Once again this is recognised as a crude measure of mean scores and should primarily be viewed as a means of viewing relative rather than absolute values of LSRW.

3.3.5 Gender Differences

Gender was treated as nominal (dichotomous) data in SPSS. In both sets Males and females were coded as 1 and 2 respectively. Gender differences were analysed by calculating and comparing the average amount of time males and females spent on the various activities. Differences were accorded statistical significance using Spearman's and Pearson's Rank (see Section 3.3.1).

3.4 Data Collection: Validity and Reliability

Some qualitative researchers have regarded the terms *validity* and *reliability* as being inextricably linked to and biased in favour of positivist ideas, suggesting that there is no such thing as an objective social reality (Kvale, 2007). Gorard (2012, p. 8) on the other hand believes that "personal judgements lie at the heart of all research.... regardless of the kinds of data to be collected. The idea that quantitative work is objective and

qualitative is subjective is based on a misunderstanding of how research is actually conducted”.

Although there is a degree of recognition regarding the flaws in the concept of *validity* and *reliability*, they are regarded as central concepts in education research and are thus used in this present thesis. According to Frey (2018, p. 1), “at the broadest level, validity refers to the extent to which a claim, result, inference, or argument is well founded. In the social sciences, the term *validity* is often (but not exclusively) used in reference to educational and psychological measurement and assessment”. He goes on to say that validity is seen in terms of the extent to which a test measures what it claims to measure (Frey, 2018) and reliability as a form of measurement precision. Reliability is considered high if the scores or ratings for each examinee are consistent over replications of the testing procedure (Frey, 2018). Frey (2018, p. 1) also adds that in social science “there remains considerable controversy surrounding the definition of validity and many related concepts and terms”. However, for the purposes of this study, validity refers to the accuracy of an assessment, whereas reliability refers to its consistency.

To facilitate reliability, as much of the data as possible has been made available in the appendices, without compromising the anonymity of the participants, and a comprehensive outline of the rationale and implementation of the research design and methods has been presented. Validity was ensured as far as possible by using a sequence of data collection and analysis that avoided any bias as well as an attempt to be as objective as possible during data collection and analysis. For example, language diary participants were deliberately selected with the intention of avoiding purposeful selection. Students were asked to volunteer and all volunteers were allowed to complete the task. This could of course favour the more capable students, but fortunately the case-study groups contained a good balance of abilities (based on proficiency scores and teacher’s knowledge).

Reliability was assessed using Pearson’s correlation coefficient and Cronbach’s alpha (see Appendix P). Cronbach’s alpha is most commonly used when you want to assess the internal consistency of a questionnaire (or survey) that is made up of multiple Likert-type scales and items, but because alpha is calculated from a Pearson correlation matrix, it can be used on interval non-Likert-type scales too (Morgan, 2015).

There are four types of validity²¹: face validity, content validity, criterion validity, and construct validity (see for example Hamp-Lyons, 2003). Face validity and criterion validity could be used in this instance.

3.5 Teacher as Researcher and Ethical Considerations

Lawrence Stenhouse is credited with introducing the term ‘teacher as a researcher,’ stipulating that “it is not enough that teachers’ work should be studied: they need to study it themselves” (Stenhouse, 1975, p. 143). Some researchers have actively encouraged the role of the teacher researcher, for example Fareh & Saeed, (2011) who stress that teachers have a role to play as an active catalyst for change in teaching practices, course design and problem solving, a view also expressed by Brown (2001). Moreover, Pring (2015, p. 144) candidly questions the reliability of an ‘outside researcher’ coming in and trying to understand the complexity integral to an active classroom environment. He questions whether this is feasible given the periodic visits and brief acquaintance that is attributed to outside researchers. Such questions have led to the emergence of the *teacher researcher* in recent years.

In educational research where the educator is also a researcher, the dual role creates potential ethical issues which need to be considered when designing the study (e.g. Bournot-Trites & Belanger, 2005; Nolen & Putten, 2007; Brydon-Miller, 2009).

Creswell (2014) underlines that, as a teacher researcher, care must be taken to ensure that data collection is not coercive. You need to acknowledge the dual role of teacher and researcher and it is important that the students are given the chance to opt out if they want to. Brydon-Miller (2009) suggested this dual role meant the teacher should employ ‘covenantal ethics’, which “refers to an understanding of research ethics that is based on the responsibility to act in the best interest of others. This responsibility should be demonstrated at every step of the process” (Coghlan & Brydon-Miller, 2014, p. 2) and includes a commitment to open and transparent participation.

²¹ The simplest validity is face validity, which is the weakest form of validity whereby a measure looks as if it is valid to an intelligent onlooker. Content validity is related to face validity but relies upon experts or informed third parties looking at your instrument. Criterion validity refers to the measurable relationship, usually correlational. According to Hays and Reed (2008, p. 148), “construct validity is the extent to which the measure behaves in a way consistent with theoretical hypotheses and represents how well scores on the instrument are indicative of the theoretical construct”.

The Norwegian National Research Ethics Committees' (NESH, 2021) Guidelines for Research Ethics in the Social Sciences, Humanities, Law and Theology, provides a comprehensive outline of the roles and responsibilities of the researcher with respect to their participants. There are four main considerations: firstly, the participants (students), must be made fully aware of the dual role of teacher and researcher and at what times these two roles are adopted; secondly, it is also important that the participants are aware that they can 'opt out' of the study at any time; thirdly, the issue of consent of any data use is vital and finally, anonymity must be ensured.

In order to address these four concerns, students were given a detailed overview of the type of research that was to be carried out (see Appendix A). All of my students were over 15 years of age and as such parental consent was not required. Despite this, it was decided to inform the parents as well and ask them for their consent, since a significant amount of data would be collected, including results from proficiency tests. Consent was also secured from the school and the students themselves.

It was made clear to students, both orally and in-writing on numerous occasions, that they were under no obligation to participate and that there would be no negative consequences if they chose not to.

Consent was also secured for the use of proficiency results and other scores the students attained during their study year (see Appendix A). The participants were made aware of the chronology of data collection, underlining that their scores would be awarded before the data analysis had started, so that there was no question of the questionnaires influencing their scores.

Careful consideration was also given towards the impact the data collection would have on the students, since a significant amount of data was collected. Care was therefore taken during data collection to ensure that the research project did not impinge on the students' learning experience and outcomes. This was outlined in the consent forms sent out to parents and students. The data collected was deliberately integrated into the English lessons and used by the students. The questionnaires were, for example, a form of self-assessment as were the vocabulary tests.

Confidentiality is of paramount importance when conducting research and great care was taken with storage of data and anonymising of the participants. Students were therefore assigned numbers at the start of the project and these numbers rather than their names were subsequently used during data input and analysis. Care has been taken not to mention the school's name or the county it is located in.

3.6 Possible Limitations of the Research Design

Although the TAF class presented an exciting opportunity because of its unique mix of vocational and academic elements, this very uniqueness presents the most challenging aspect of the study: limitations in terms of transferability of the findings. There are very few TAF classes in Norway and hence TAF students. However, conversely, because TAF essentially straddles vocational and general study courses, it could be argued that these findings have relevance to a broad spectrum of students.

A number of problems presented themselves relatively quickly after the primary stage of data collection. Firstly, and most importantly, I did not have enough data for a statistically viable study. Although this was partly resolved by applying to study another TAF class the following year, it is still a relatively small study group. Secondly, trying to integrate the extramural English with the in-school English proved to be the Achilles heel. One of the biggest challenges is the quantity and quality of data that has to be collected given the fact that you are studying two different settings: extramural and intramural. Another challenge is finding a common thread between these two settings that can be measured to a satisfactory degree in terms of reliability and validity (see *Theoretical Background 2.2.4*). In the end, in-school achievements and vocabulary were used, but not to the complete satisfaction of the researcher.

“Traditional scientific method has always been at the very best 20/20 hindsight,” begins the famous quote from Robert M. Pirsig and describes perfectly the situation here. As soon as statistical analysis was started, the failings within the data collection become all too apparent. For example, using categorical, single-response options with numeric range labels that has an open-ended final interval is somewhat arbitrary as outlined in Section 3.3.4. It would have been much better to have a closed category and ask the students to write down a definitive number of hours if they thought they exceeded this. In fact, using a standard more simplified and preferably continuous ratio scale would have been the optimal, albeit challenging, in terms of statistical analyses. Also, defining the EE variables much more precisely and clearly would have been useful, something Warnby (2021) has begun to address. Blogs for instance, is a very diffuse term and can refer to all sorts of things. Reading too needed to be much more precisely defined in terms of reading-mode and type of text. The list goes on. Relying on the students’ ability to recall accurately proved to be a challenge also and affects the validity and reliability of the data. The students had the most problems with respect to apps that used English and Norwegian

interchangeably. It was difficult for them to give a clear estimation in these instances, and some forgot that they were just recording English use and not Norwegian.

Using so many methods of data gathering generates a substantial amount of statistical data and this in turn presents many opportunities for human error. Idealistically, all of this data should be cross-checked and verified with the students immediately after the survey is completed. The sequence of research for the present study prevented this from being achieved.

The greatest challenge was achieving a satisfactory level of *methodological triangulation* within the relatively small physical framework of a Master's thesis. In line with methodological triangulation requirements, a number of methods were used to gather data in order to increase the validity and reliability of the results. During the data analysis phase, it became quickly apparent that there was too much data to fit into a Master's thesis. Therefore, judicious selection was needed which had to be carried out without diminishing the overall integrity of the findings. This means that a lot of the data collected and analysed could not be included in this present thesis.

Chapter 4: Results and Discussion

4.1 Introduction

In order to address the research problems outlined in the introductory chapter a significant amount of data was collected over a two and a half-year period, of which the data that is directly relevant to the study has been made available in the appendices. Results from the analysis of the data, using methodologies outlined in the previous chapter, are presented below structured in such a way that they address each of the research questions in turn. Each set of results relating to a research question is followed by a discussion, with the chapter culminating in a general discussion which primarily views the results in the light of extramural English (EE) as a concept, followed by a brief summary.

The first research question which concerned this study, was as to whether there were any easily identifiable patterns in the *extent* and *types* of extramural English within and between Sets A & B - which represent different classes (student groups). Some statistical analyses were therefore applied to both Sets A and B individually, which allowed analysis of the individual classes. Analysis of a third Set AB, which combines data from the two class Sets A and B, was also carried out. Study subsets Aa + Bb were analysed individually and combined as Subset AaBb (see *Methodology* 3.1.2)²². Calculations were also made on each of the sets in terms of gender differentiation (see *Methodology* 3.3.5). However, the main statistical analyses were carried out on Set AB ($n = 42$) since this set was above the threshold needed for correlation studies (see *Methodology* 3.1.2).

An important part of the data collection relating to the first research question was attained through questionnaires, (see *Methodology* 3.2.1.1). This provided a significant amount of useable data, but too much to be presented in detail in the present thesis.

²² Table 3.1

Name	Group	Group size
Set A	TAF class, in their first year at upper secondary school, school year 2017/2018	25 students
Set B	TAF class, in their first year at upper secondary school, school year 2018/2019	17 students
Subset Aa	Case-study from Set A	6 students
Subset Bb	Case-Study from Set B	5 students
Set AB	Set A & Set B combined	42 students
Subset AaBb	Subset A & Subset B combined	11 students

Therefore, results from the questionnaire that address the research questions directly, as well as those that add meaning, are presented in this chapter. The language diaries (see *Methodology* 3.2.1.2) provided another source of data.

4.2 Research Question 1.1: *Are there any easily identifiable patterns in the extent of extramural English within the individual student groups, across the student groups or relating to gender differences?*

4.2.1 Results

Results for Set AB showing extramural English scores with gender differentiation are given in Tables 4.1 and 4.2. Results for Set A and Set B individually, and results for Set AB without gender differentiation are presented in Appendix H. Results are based on questions 8, 30 and 35 in the Questionnaire.

Table 4.1

Measures of Time Spent/Exposed to EE Set AB: Given in Hours per Week Unless Indicated Otherwise.

Participants	Mode	<i>n</i>	<i>M</i>	<i>SD</i>
Male	EE (qu. 30)	19	38.44	23.50
Female		23	37.11	22.00
Male	EE (qu. 30) excluding music	19	33.55	21.80
Female		23	29.58	19.84
Male	EE (qu. 30) excluding music & homework	19	31.16	20.62
Female		23	26.67	18.59
Male	English in the workplace (qu. 8)	19	1.65 ^b	-
Female		23	0.97 ^c	-
Male	Writing (qu. 35)	19	3.42	3.07
Female		23	3.52	2.63
Male	Reading (qu. 35)	19	6.02	2.63
Female		23	5.41	2.77
Male	Listening (qu. 35)	19	7.50	0.00
Female		23	6.71	1.74
Male	Speaking (qu. 35)	19	2.26	2.65

Female		23	3.50	2.66
Male	Sum of LSRW ^a (qu. 35)	19	19.20	6.82
Female		23	19.15	6.85

Note. qu= question number in the questionnaire. For explanation of qu. 8, 30, 35 see Appendix H. *n* = number of participants; *M* = mean; *SD* = standard deviation.

^a = listening, speaking, reading, writing (LSRW). ^{b c} (see Appendix H)

4.2.1.1 Questionnaire: Questions 8 and 30. Table 4.1 shows that overall, the students in the study group Set AB, boys and girls recorded an average of 38.44 and 37.11 hours exposure to EE per week respectively, giving a total average of 37.71 hours per week ($n = 42$) (see Table 4.1). Noticeable is the considerable variability, within the amount of exposure to EE within and between the two class-sets A and B. For example, estimates given in question 30 on the questionnaires show that there is a range between 7 and 102.94 hours per week in Set A and between 7.00 and 71.50 hours in Set B (see Appendix H).

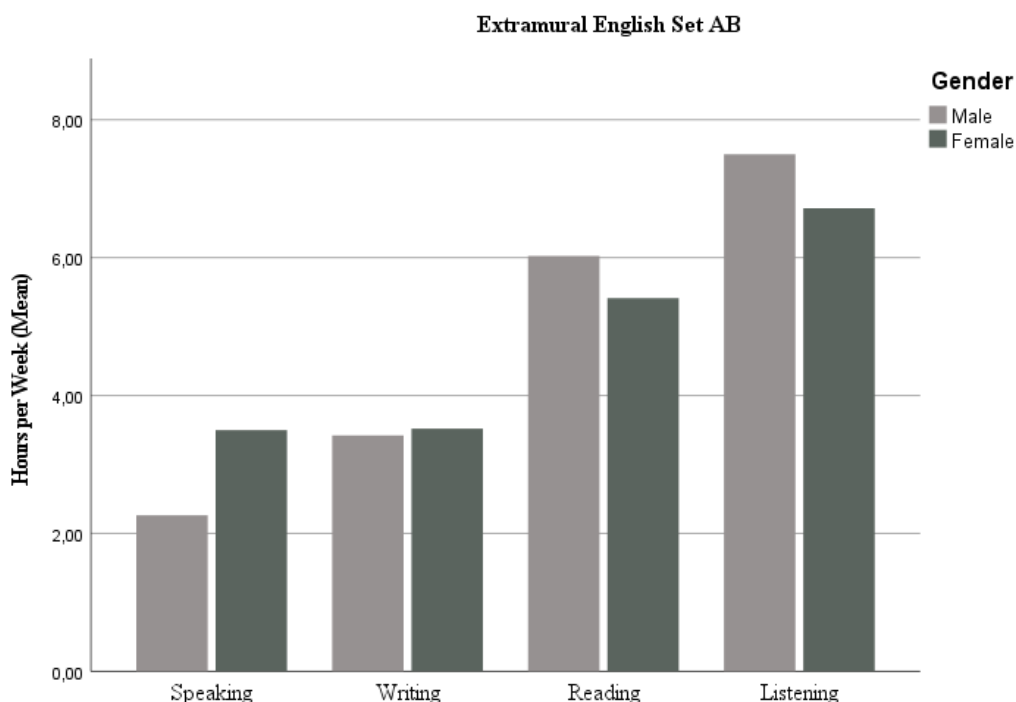
The results in Table 4.1 also show that students used relatively little English at work, especially work-related English (see also Appendix H). Those who used some English at work detailed their activities as including: reading instructions, communication with non-Norwegian speaking colleagues, finding information on the Internet, and one of the students had singing assignments where they used English lyrics and sometimes had to communicate in English. The students who indicated that they used ‘quite a lot’, ‘a lot’ or ‘very much’ English, had a non-Norwegian speaking colleague that they had to communicate with, or operated a machine whose operating language was in English.

Some students did record reading texts and viewing YouTube videos that were related to their study program and workplace. Student Aa2 for instance, who had an apprenticeship in the health sector, read an article about Ethics on the BBC website.

4.2.1.2 Questionnaire: Question 35. On the questionnaire, the students were also asked to estimate how much time they spent listening to, speaking, writing and reading English, per week, as presented in Figure 4.1.

Figure 4.1

LSRW Recordings, Set AB



Note. LSRW = listening, speaking, reading, writing. As recorded by students on question 35 of the questionnaire.

Overall, Figure 4.1 shows that most time was spent by the students listening to English, with boys estimating 7.50 hours a week and girls 6.71 hours. Least time was spent speaking (boys 2.26 and girls 3.50 hours). Reading estimates were higher than writing. The total amount of time spent in these activities by boys was 19.20 hours with girls estimating 19.15 hours a week. On average, both boys and girls were much more engaged in receptive (listening, reading) than in productive activities (speaking, writing): boys 13.52 v 5.68 and girls 12.12 v 7.02 hours per week respectively.

4.2.1.3 Language Diaries. A detailed overview of individual students' language diary recordings is given in Table 4.2 (see also Appendix I).

Table 4.2.*Total amount of EE as Recorded by Language Diary Students, Hours per Week*

Participant	Total amount of Extramural English (hours)	Extramural English music and homework omitted (hours)	Average EE language Diaries (hours)
Aa1	27.78	14.53	Subset Aa
Aa2	10.47	9.47	<i>M</i> =27.16
Aa3	10.58	4.58	
Aa4	33.68	16.58	
Aa5	47.55	29.8	
Aa6	32.92	18.92	
Bb1	13.42	7.75	Subset Bb
Bb2	7.40	1.80	<i>M</i> =21.20
Bb3	50.09	13.89	
Bb4	12.53	3.83	
Bb5	22.56	19.56	

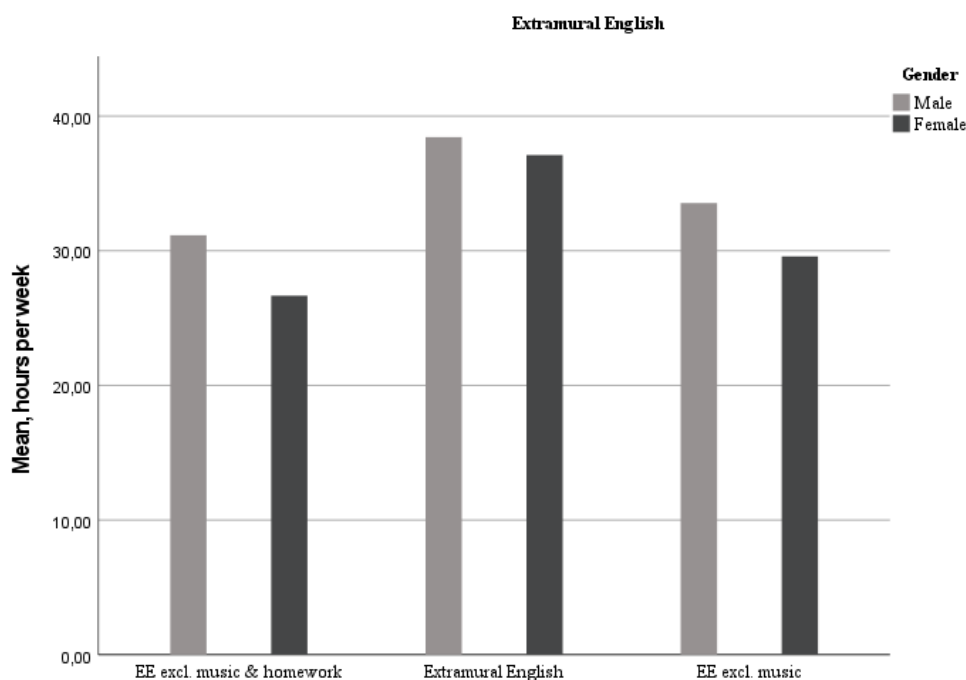
Note. *M* = mean hours per week

The language diaries recorded on average 24.45 hours of EE per week (Table 4.2). The language diaries also show a considerable range in time spent on EE, ranging between 10.47 and 47.55 hours per week in Set Aa and 7.40 and 50.09 hours per week in Set Bb (Table 4.2).

4.2.1.4 Gender Differences. Figure 4.2 shows the gender difference in EE, showing on average boys spent a little more time on extramural English activities than the girls in total (Set AB): 38.44 hours compared to 37.11 hours a week respectively, although class-wise, Set A shows that the girls (42.45) spent a little more time on EE than the boys (39.95) (see Appendix H). If we look at EE with the omission of music and homework, a similar pattern is seen, but the difference between Set A and B is less pronounced and boys estimate using more EE activities in both sets. Figure 4.2 also illustrates that girls spent more time than the boys listening to music and doing homework (see also Figure 4.5).

Figure 4.2

Extramural English, Set AB



Note. EE as calculated from question 30 in the questionnaire.

The study aimed to find out if these gender differences, in the extent of EE, were statistically significant, assuming equal variance. *T*-scores were calculated for those variables that suggested there was a difference as indicated by arithmetic mean, to calculate if the difference was significant²³ (see Table 4.3).

²³ In most cases, a *p*-value of 0.05 (5%) is accepted to mean the data is valid (see *Methodology* 3.2.1). When $p < .05$, the effect (in the case of the *t*-test, the difference between the groups on the dependent variable) is statistically significant and the null hypothesis is rejected. In other words, the sample provides sufficient evidence to conclude that the group means are different. The terms ‘Equal variance’ and ‘not equal variance assumed’, were applied according to Levene’s test population where variances are *not* equal if “*Sig.*” or $p < .05$.

Table 4.3*Comparing Means Independent Samples T-test, Set AB*

Participants	Mode	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Male	EE	19	38.44	23.50	0.19	40	0.851
Female		23	37.11	22.00			
Male	Sum of	19	19.20	6.82	0.028	40	0.978
Female	LSRW	23	19.15	6.85			

Note. *M* = Mean scores; *SD* = Standard Deviation; *t* = t statistic; *df* = degrees of freedom; *p* = correlation

In Table 4.3, results of the analyses show that there is not a significant gender difference in the extent of exposure to extramural English.

4.2.2 Discussion

Overall, the students in the study group recorded an average of 37.71 hours exposure to EE per week. Only some of the studies on EE, referred to in the *Theoretical Background 2.3.2*, provide a statistical value on the amount of exposure, thus limiting the number of direct comparisons that can be made. However, in general, the recordings made here appear to be very similar to those recorded by Olsson and Sylven (2015) in their study (see *Theoretical Background 2.3.2*). On comparing CLIL to non-CLIL students, they recorded that the former spent 459.00 minutes per day and the latter 337.00 minutes per day on EE. Since the students in this study are non-CLIL students, if we compare the two studies then this study group spent²⁴ 323.23 minutes per day in EE activities compared to Olsson and Sylven's students, 337.00 minutes per day. Perhaps more interestingly, both in the present study and that of Olsson and Sylven, non-CLIL students are recording much lower EE than the CLIL students (as mentioned above).

However, both the results in this and Olsson and Sylven's study seem to be much higher than those recorded by Sundqvist and Sylven (2016, p. 32) who present results based on data from their own empirical studies together with Swedish governmental media reports. They found that in Sweden the amount of EE increased steadily with age and that the average 15-year-old spent 18.00 hours²⁵ per week (154.29 minutes per day) engaged in EE activities. Other Swedish studies include Sundqvist (2009) who reported

²⁴ Set AB spent on average 37.71 hours per week in EE activities. Converting to minutes per day gives a figure of 323.23 minutes.

²⁵ 18 hours per week = 154.29 minutes per day

that boys spent on average close to 21.00 hours per week and 16.40 hours for girls on extramural English activities (which included listening to music and watching TV/film amongst others), and Olsson (2012, p. 47) who reported that her study of 16-year-olds in Sweden recorded on average 2.90 hours (174.00 minutes) of EE per day (including music, TV/film amongst others).

Forsman (2004) found that Finnish teenagers in the secondary level of their nine-year compulsory school spent 51.10 and 36.70 hours a week exposed to EE in urban and rural areas respectively (as cited in Sundqvist & Sylven, 2016). The results in the present study outlined above, are very similar to those findings presented by Forsman (2004) in relation to her students in rural areas (37.71 v 36.70), which is perhaps not surprising given that the research for the present study was carried out in a school lying within a rural area (see *Theoretical Background 2.3.2*).

Although these studies are not longitudinal studies, the findings outlined above, all happening to be in Nordic countries, do not show a clear pattern of increase or decrease in the level of EE in the last decade, if Forsman (2004) is taken into account: as mentioned previously, she recorded a very similar EE exposure to that of the present study. However, if we consider the results from other studies, there is a tentative recognition of an increase in EE activity in the last decade or so.

If it is assumed that increased social media use equates to increased EE, then these study-results would seem to align themselves with a growing body of research that recognises an increase in social media use amongst teenagers in general, nationally and internationally (e.g. Medietilsynet, 2020; Dean, 2021). More specifically, Norwegians are reported to have one of the highest connectivity rates in the world, with 99.00% of Norwegians using the Internet in 2021, having steadily increased their use from 57.00-99.00% since 2001 (Hansen-Møllerud, 2002; Statista, 2019; United Nations; Statistics Norway). This is a little higher than Sweden who saw an increase from 45.70 - 94.50%. The students in this particular study certainly had easy access to the Internet through their mobile phones and computers and the language diaries revealed that the students used English to a large degree during their Internet use.

However, given that the study group is relatively small, and the body of available literature is relatively limited, it is very difficult to make any generalisations about differences for example between Swedish and Norwegian students, or any trends in Norwegian teenagers EE during the last two decades. More studies are needed. Furthermore, any correlations between social media use for example and English use are difficult. Much more data is needed to establish any longitudinal patterns.

In general, the results show that the study participants are exposed to substantial levels of EE, with the proviso that there is also considerable variation in the level of exposure amongst the same age group at this particular school. Olsson and Sylven (2015) also noted that the high values of the standard deviation in their study groups indicated that there was considerable variation within their groups.

A number of previous studies in Norway have focused on those students who have high exposure to a specific type of EE. Some of these studies focused on so-called ‘outliers’ who were defined in such terms because of their higher scores in L2 (English) reading proficiency in comparison to their mother-tongue (Norwegian), attributed to extensive gaming (e.g, Brevik 2016; Garvoll, 2017). Other studies have also found a correlation between high exposure to gaming and high levels of English proficiency (e.g. Sylven & Sundqvist, 2012; Sletten, et al., 2015).

There were not really any extensive gamers amongst the present study group. Student 24A had a relatively high exposure relating to gaming as well as YouTube and Student 16B had a relatively high exposure attributed to a whole range of activities. This suggests that high exposure to EE can be attributed to activities other than gaming. Notably, students’ involvement in a variety of different types of EE, was seen across both study groups.

Very few studies have focused on students’ extramural English exposure in the workplace, even though this could potentially provide an important arena for acquiring technical and general vocabulary (see *Theoretical Background 2.2.2*). The students in this study group have shown that they had very little exposure to EE at their workplace. Furthermore, serendipitous circumstances such as having a non-Norwegian speaking co-worker or having to use an English language manual, accounted for higher levels of exposure. Befring (2004), in her study looking at upper secondary vocational students in Norway, also found that the students had been exposed to very little English in their workplaces.

If we look at the level of exposure class-wise, as mentioned previously, the amount of time spent on EE activities shows a decrease from Set A (2018) to Set B (2019): 41.05 to 32.79 hours EE per week respectively. Since Set A has a ratio of 14:11 boys to girls, whereas Set B has a ratio of 5:12 it is tempting to assume that the decrease in EE exposure coincides with a decrease in the proportion of boys in the class. However, closer inspection shows that the decrease is seen both in the boys and girls’ scores (see Appendix H) and it appears that the class as a whole had less exposure. Together with the high standard deviations within the sets, it shows that there is considerable variation in the

amount of EE these students, individually, are exposed to. Why there is such considerable variation between individual students, is an interesting question that merits further investigation.

Previous studies have reported gender differences in exposure to EE. Olsson (2012 p. 48) for example reported that the average time Swedish upper secondary students in her study, spent in contact with English was 3.30 hours per day for the boys and 2.50 hours for the girls. In comparison, the present study group's reported exposure was 38.44 hours a week for boys compared to 37.11 hours a week for girls, which gives equivalent daily values of 5.49 and 5.30 hours. This shows not only that this study group has a higher level of exposure to EE but that there is also less of a gender gap.

There are a number of possible explanations. The boys in the present study group may have relatively low levels of EE exposure compared to other studies, or conversely, the girls in the present study group may have relatively high levels of EE exposure compared to other studies. Perhaps certain activities have become increasingly appealing to girls of this age-group and hence the relatively high levels of exposure amongst girls is simply reflecting a general trend. Or that the girls were investing more of their time in EE because this was an English study year and they wanted to achieve a high grade: after all, the results in Appendix J show that girls spent more time doing homework than boys during the first few months. This would of course assume that some aspects of EE had a degree of deliberate intention to acquire English. Or lastly, something that can rarely be ruled out, this could be the result of an idiosyncratic study group which does not represent the norm. With such a small study group and a lack of comparison studies, it is of course difficult to make any firm assertions, however, there is little to suggest that this group does not represent similar student groups in Norway. In general, more research is needed.

4.3 Research Question 1.2: *Are there any easily identifiable patterns in the types of extramural English within the individual student groups, across the student groups or relating to gender differences?*

4.3.1 Results

The first research question was not only concerned with identifying any patterns in the *extent* of extramural English exposure, but also in the *types* of extramural exposure within the study group (see *Introduction 1.6*). Results are presented in a series of tables in Appendix J and the gender differentiation of Set AB together with variables measured are

shown in Table 4.4. The students were also asked about their views on their use of English in their spare time and which types of EE had helped with their language development, as well as their perception of the relative difficulty of certain types of English (see *Methodology* 3.2.1.1).

Table 4.4

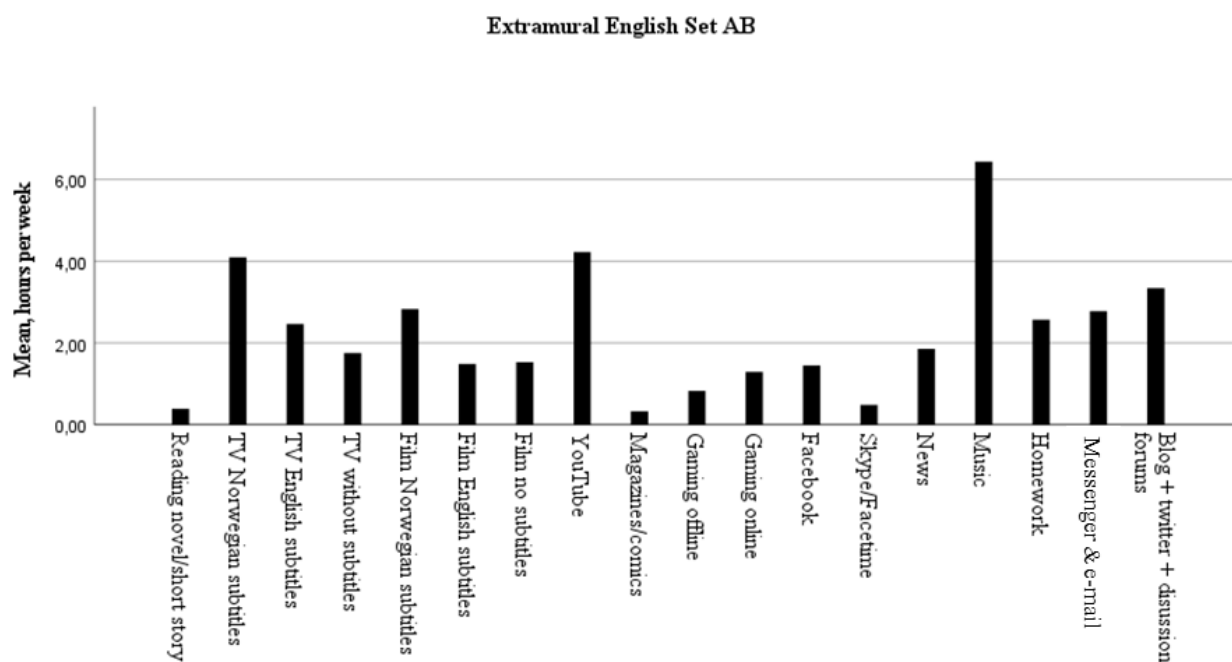
Detailing the Participants and Variables in Question 30, Set AB (see Appendix J)

Participants	<i>n</i>	Variables: Type of extramural English
Male	19	Reading, TV, Film, YouTube, Gaming, Music, Facebook, Snapchat, messenger-e-mail, Blog-Twitter-Discussion forums, Magazines, News, Comics, Homework, other
Female	23	

The means scores within Set AB presented in Appendix J, are presented as a bar chart in Figures 4.3 and 4.4, to provide a graphic overview.

Figure 4.3

Extramural English Activities of Students in Set AB²⁶



²⁶ Messenger and e-mail were grouped together as were Twitter, blogs and discussion forums (see *Methodology* 3.3.4). Snapchat measurements are shown in Appendix J.

4.3.1.1 Reading and Vocabulary. Results show that students spent the least amount of time, extramurally, reading English language novels or short stories. On average students in Set A spent 0.2 hours a week reading novels/short stories and Set B 0.68 hours a week (Appendix J). Results were skewed by three students (all girls) who in comparison spent significantly more time reading, on average, than the others. For example, student Bb5 recorded reading on average 2.83 hours per week, Bb3 1.08 and Aa1 1.67 hours per week in their language diaries (see Appendix I). Student Bb1 also recorded listening to a novel on an audio file for one hour and 30 minutes, on the way home on the bus. Novels and short stories that the case-study students read or listened to in their seven-day period were: *Pride & Prejudice*, *Vanity Fair*, *The Picture of Dorian Gray*, *Assassin's Apprentice*, *Royal Assassin* and *The Absolutely True Diary of a Part-Time Indian*.

Boys in Set B spent on average 0.70 hours a week engaged in reading newspapers and comics. However, very few of the case-study students recorded reading a newspaper article in their language diary. Student Aa4 spent twenty minutes reading a scientific article in a digital newspaper, Student Bb3 recorded reading a digital newspaper for 75 minutes, whilst on the way home on the bus and Student Aa1 read a Guardian Newspaper article digitally for fifteen minutes. One Student Bb3 also recorded reading a Manga comic, 'One Piece' for sixty minutes. Also, one student recorded following New York Times on Twitter.

During the study period, students were actively encouraged to follow international news in English speaking countries during the school year as a part of the curriculum. An outline of news media that the students followed is given below but some chose to listen to or watch the news instead. News was attained from a number of sources including: football news Internet, Manchester United homepage for news, Buzzfeednews, Clevvernews, Guardian Internet paper, Guardian Sport Internet, Twitter Elon Musk, BBC, NY Times and National Geographic's Daily Story. Student Aa2 said that they found using the BBC news app on their mobile a really good way to read English little and often.

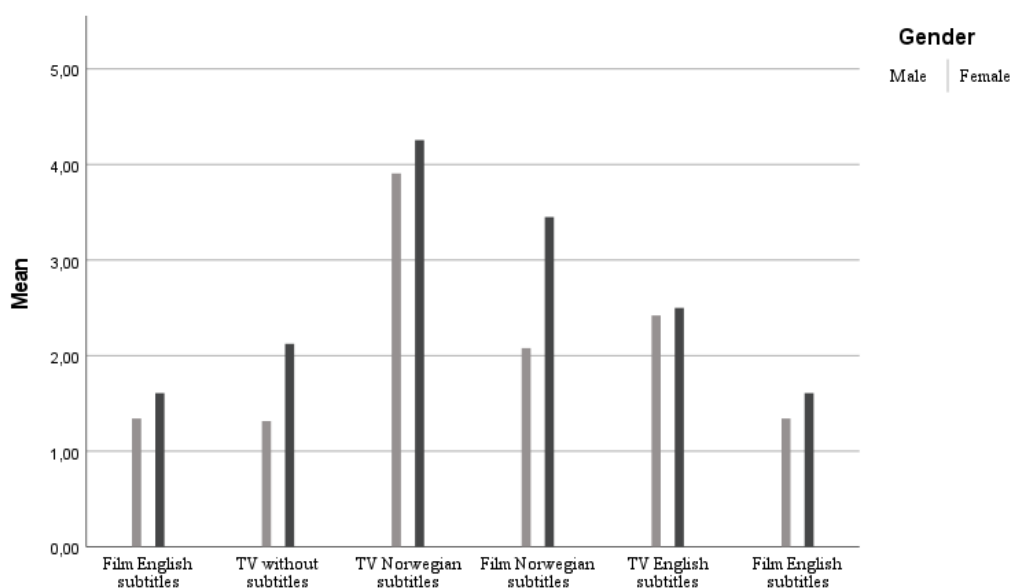
4.3.1.2 Film and TV-watching. On the opposite end of the spectrum, by far the most popular extramural English activity was watching TV and films. In the questionnaires and language diaries, the students were asked to estimate exposure to typical TV programmes such as series and documentaries as well as more conventional films. The students were asked to indicate whether they watched them in English with Norwegian subtitles, or in English with English subtitles or in English with no subtitles.

Film and TV viewing preferences varied between Sets A and B, and between the two genders in terms of their preferred medium and subtitle choice. Girls in both sets preferred watching English language TV programmes with Norwegian subtitles (4.58 hours + 3.96 hours per week in Sets A and B respectively), as did boys in Set A (4.41 hours) (Appendix J). Girls in set A also on average spent 4.12 hours per week watching English language films with Norwegian subtitles. Boys in Set B shared their time between TV and film, using only 2.5 hours a week on average watching both English language films and TV using Norwegian subtitles. In general, it seems that whether it be TV or film, this group of students preferred to use Norwegian subtitles whilst watching English language media.

If total viewing time is considered, irrespective of subtitle choice, then boys in Set AB spent 7.65 hours a week watching TV and girls spent 8.87 hours a week. Regarding films, boys spent 5.03 hours a week watching films and girls spent 6.54 hours a week.

Figure 4.4

English Language TV and films: Hours per week, Set AB



The language diaries provided a more detailed picture of the types of viewing the students were engaged in (see Table 4.5). As mentioned previously, only data recorded in the first seven days of the language diaries has been used in the general statistics presented in the present thesis. However, a number of students recorded up to twelve days (see Appendix I). TV and film viewings are presented in Table 4.5.

Table 4.5*Films and TV Programmes Listed in the Language Diaries*

	Subset Aa	Subset Bb
TV Programmes	Grey's Anatomy, Heartbeat, Modern Family, Reign, 21 Thunder, Friends, Frankenstein's Chronicles and How I met your Mother	How I met Your Mother, The Equalizer, Captain Marvel, Suits, The Bachelor, Say Yes to the Dress, Sherlock, White Collar
Films	Red October, Doctor Strange, Gattaca and High School Musical	

Students reported watching a variety of TV programmes as well as films. They tended to have a favourite or favourites that they watched multiple episodes of during the week.

4.3.1.3 Music. Also popular was listening to English language music. As mentioned, the sense in which the term 'listening' is used here is explained in Section 4.3.2.3. On average boys spent 5.12 hours and girls 7.52 hours a week engaged in this activity (Appendix J), some students recording well above average scores: students, Aa5, recorded 17.75 hours a week listening to music, whilst student Bb3 recorded 36.2 hours a week (see Appendix J).

4.3.1.4 YouTube. YouTube was popular, especially with boys, who estimated that they spent 5.94 hours a week watching English language YouTube and girls watched 2.80 hours a week. Boys in Set A watched the most YouTube, estimating 6.35 hours a week on average engaged in this activity. Amongst the language diary-students the highest scorers were Student Aa2 who spent 6.20 hours a week on YouTube and Bb3 who used 5.40 hours. The language diary students recorded watching a wide variety of different YouTubers, documentary videos, informative videos and entertainment videos. YouTubers were popular viewing and included (see also Moylan 2015): LillySingh (Canadian), EvanFong (Canadian VanossGaming), PewDiePie (Swedish, gamer), Zoella (UK blogger, beauty), Thatcher Joe (UK vlogger), Sidemen (UK group), Joey Graceffa (USA vlogger & gaming), Jeremy Fragrance (German, fragrance influencer), Miniminter (gamer) and Sacconejolys (Irish family vloggers).

The students also mentioned using YouTube videos to help them in their other subjects such as vocational *Healthcare, Child and Youth Development*. One student had a long list of vocationally related factual YouTube videos that they had seen, such as “Super

Bacteria Has a New Enemy: The CRISPR pill”. The students had also seen an English language film in their Science (Naturfag) lessons: *Gattaca*. Students also used English language sources to help them with their English tasks and homework, such as using YouTube videos to find out more information about Shamima Begum as well as Greta Thunberg’s school strike.

4.3.1.5 Gaming. Both girls and boys used more time gaming online than gaming offline but spent relatively little time gaming in general. Boys estimated using 2.12 hours gaming online using English language and girls estimated using 0.61 hours gaming online using English language a week. The only game listed specifically by name in the language diary was FIFA.

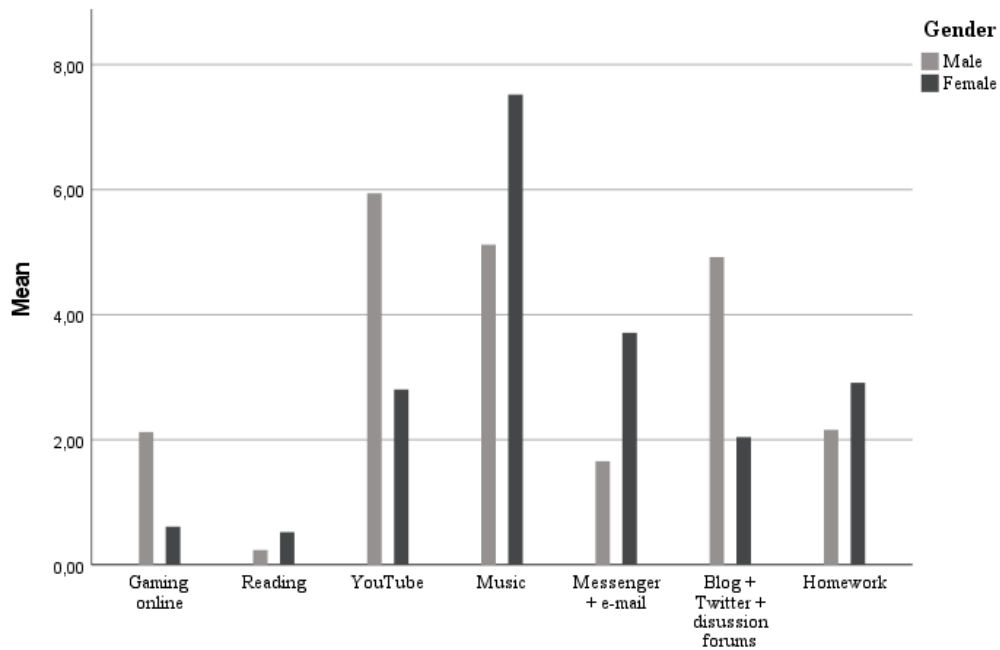
4.3.1.6 Social Media. Social media, defined by the *Oxford English Dictionary* (Lexico.com) as being “websites and applications that enable users to create and share content or to participate in social networking,” were popular with some students. Girls spent more time on apps such as Snapchat and Messenger (see Appendix J). Instagram and Facebook were used by some of the students and text messaging, in English. Boys used more time on blog-type apps, including Twitter and other discussion forums.

4.3.1.7 Podcasts. Podcasts included *The Joe Rogan Experience* and *Stuff You Should Know*. Student Bb4 reported listening to a non-work related Podcast whilst at work, indicating that exposure to EE in the work-place was not necessarily vocationally orientated.

4.3.1.8 Gender Differences. As Tables 4.6 and 4.7 show, arithmetic means of various activities and a *t*-score estimating the significance of the difference in the arithmetic means of boys and girls, reveals that some significant gender differences were found in the types of EE. The findings are presented graphically in Figure 4.5.

Figure 4.5

Selected EE Types, Hours per Week, Set AB



The widest gender gap was seen in YouTube activity which was significant and is shown in Table 4.6.

Table 4.6

Correlation between Gender and YouTube, Set AB

Nominal Variable	Quantitative Variable	Set AB Point biserial correlation
Gender	YouTube	-0.414 (correlation is significant at the 0.01 level) Sig 2-tailed 0.006

Table 4.7 presents various *t*-test scores accorded to gender differences in various EE activities.

Table 4.7

Independent Samples T-tests, Set AB

Participants	Mode	n	M	SD	<i>t</i>	<i>df</i>	<i>p</i>
Male	YouTube	19	5.94	4.23	2.77	30.26	0.009
Female		23	2.80	2.81			
Male	Gaming	19	2.12	3.10	1.68	24.77	0.11
Female		23	0.61	1.03			
Male	Messenger + e-mail	19	1.66	1.53	-2.18	28.72	0.038
Female		23	3.71	4.20			
Male	Blog, twitter and discussion forums	19	4.92	3.81	2.69	40.00	0.010
Female		23	2.04	3.14			
Male	Listening to Music	19	5.12	5.00	-1,80	40.00	0.007
Female		23	7.52	3.63			

Note. *p* value is less than 0.05 (2 tailed) the difference between the means is statistically significant. *M* = Mean scores; *SD* = Standard Deviation. *t* = *t* statistic; *df* = degrees of freedom; *p* = correlation

Tables 4.6 and 4.7 show that boys spent significantly more time watching YouTube than girls, as well as using blog, Twitter and discussion forums. Girls spent significantly more time using Messenger and e-mail as well as listening to music.

4.3.1.9 Students' Views. Students' perception of where and what type of EE activities contributed to their English language skills is shown in the Table 4.8, compiled from questions 23-29, 34 and 36-41, in the questionnaire. As Table 4.8 reveals, students consider TV, film (32.6%) and YouTube (37.5%) as improving their language skills significantly as opposed to reading typical classroom genres (7.4%) or novels (5%).

Table 4.8

Taken from Questions 36-41 in the Questionnaire: What Types of EE Contribute to Language Learning

Question	Significantly	Quite a lot	Not very much	Almost nothing	Not relevant
Compared to other resources how much has reading school texts such as in Targets, hand-outs, internet pages, at school and in your spare time, contributed to your English language skills?	7.40	37.10	40.80	11.00	3.70
Compared to other resources how much has reading English novels and short stories at school and in your spare time contributed to your English language skills?	5.00	12.50	32.50	30.00	20.00
Compared to other resources how much has English speaking TV and film at school and in your spare time contributed to your English language skills?	32.60	55.80	9.30	2.30	0.00
Compared to other resources how much has YouTube at school and in your spare time contributed to your English language skills?	37.50	25.00	25.00	10.00	2.50

Note. The questions are translated from Norwegian (my translations).

Students were also asked where they felt they had learnt the most English, extramurally or in-school English lessons. Findings are presented in Table 4.9.

Table 4.9

Taken from Questions 47-49, in the Questionnaire: Where English is Learnt

Question	Everything at school	Mostly through school	Half part school, half part spare time	Mostly outside of school	Everything from outside of school
In lower secondary school where do you feel that you learnt the most English?	2.40	22.00	51.20	24.40	0.00
In year 1 at upper secondary school where do you feel that you have learnt the most English?	11.90	50.10	28.60	7.10	2.30
In general, where do you feel that you have learnt the most English?	5.10	25.60	46.20	23.10	0.00

Note. The questions are translated from Norwegian (my translations).

More generally, students believe that they learn their English for the most part at school during their year 1 English course at upper secondary school, whereas they feel that they learnt English in equal measure between school and extramural activities during their lower secondary school education. Indeed, 24.4% of students feel that they learnt their English mostly extramurally during their years at lower secondary school. Students were also asked, on the questionnaire, about their thoughts relating to English used in their spare time. Results are shown in the Table 4.10.

Table 4.10*Taken from Question 34 in the Questionnaire, Expressed as Percentages*

	Strongly agree	Partly agree	Partly disagree	Strongly disagree
English is important for entertainment and social situations	56.00	44.00	0.00	0.00
I want to improve my English for use in social situations	56.00	28.00	16.00	0.00
I like to use English in my spare time	23.00	59.00	5.00	13.00
It is difficult using English in my spare time	17.00	17.00	49.00	17.00
Teenagers in Norway spend too much time exposed to English in their spare time	4.00	17.00	29.00	50.00

Note. The questions are translated from Norwegian (my translations).

Table 4.10 shows that students strongly agree that English is important for them in social situations, and they are therefore perhaps not surprisingly motivated to improve their English. A large proportion of them like using English in their spare time and they find it quite easy. They also think that teenagers in Norway do not spend too much of their spare time exposed to English and similarly, results in Appendix Q show that students feel that their in-school English is relevant for their spare time.

Responses to questions 23 - 29 on the questionnaire, shown in Table 4.11, aimed at finding out how difficult students found certain aspects of English language use. This information provides another layer of information that could prove useful in understanding the extra- and intramural relationship.

Table 4.11*Taken from Questions 23-29, in the Questionnaire: Students' Views on In-school English*

	Very easy	Easy	Quite easy	Quite difficult	Difficult	Very difficult
As a rule, how easy do you find reading and understanding texts in Targets and novels?	7.10	28.60	45.30	9.50	9.50	0.00
As a rule, how easy do you find understanding spoken English in English lessons?	22.50	42.50	30.00	2.50	2.50	0.00
As a rule, how easy do you find using oral English in English lessons?	2.60	10.50	31.60	34.20	15.80	5.30
As a rule, how easy do you find answering a task from Targets in English?	2.60	15.80	47.40	26.30	7.90	0.00
As a rule, how easy do you find writing/making PowerPoints or poster?	5.30	36.8	39.50	13.20	5.20	0.00
As a rule, how easy do you find writing an essay (e.g. tentamen).	0.00	10.20	23.10	35.90	23.10	7.70
As a rule, how easy do you find writing a vocationally orientated text in English (e.g. in-depth project).	4.00	12.00	28.00	32.00	20.00	4.00

Note. The questions are translated from Norwegian (my translations).

The results in Table 4.11 show that students found the easiest task by far was understanding spoken English in English lessons, with 22.5% of students defining it as ‘very easy’. Speaking English in the classroom was considered much more difficult in comparison, with 34.2, 15.8 and 5.3 % of students defining it as quite difficult, difficult and very difficult respectively. The students were asked to give reasons and 15 of the students did so (see Appendix M). A number of the students identified anxiety and the fear of making mistakes as the reason.

4.3.2 Discussion

4.3.2.1 Reading and Vocabulary. Similar to previous studies (e.g. Sundqvist 2009; Olsson, 2011; Garvoll, 2017; Warnby, 2021), reading novels, short stories and newspapers outside of school has proved one of the least popular activities amongst the present study group. This is perhaps an undesirable circumstance when we consider the body of research that links extensive reading with effective language learning (e.g. Horst, 2005; Nation 2007, 2014, 2015, see also *Theoretical Background 2.2.2*).

Nation (2015) suggests that as much as 3/16 of a language course should be devoted to extensive reading. He also provides a more detailed weekly requirement guide for extensive reading of graded readers in order to learn 1000 word-families a year, which varies between 33 minutes to 8 hours 20 minutes depending on the word level. Set A reported reading novels and short stories on average for 12 minutes a week and Set B for 41 minutes a week, extramurally.

It is not just the quantity of text that the student is exposed to that is important but also the quality of the learning process. Krashen’s input hypothesis as outlined in *Theoretical Background 2.2.1*, determines that in-order to be conducive to increasing language competence, the comprehensible input should correspond to $i + 1$, where i is the current mastery level of the individual reader. The obvious question is as to whether the students are aware of their i value and if so, do they automatically read texts at this level + 1, extramurally? Whether this could be a possible school-extramural overlap is discussed in the concluding chapter.

Output, Swain (1990) would argue, is as important as input, and Nation (2013) amongst other scholars would agree (see *Theoretical Background 2.2.1*). However, as results show (see Figure 4.1 & 4.3) the students were on average, outside of school, much more engaged in receptive (listening, reading) - *input* -, than in productive activities (speaking, writing) - *output* - : boys 13.52 v 5.68 and girls 12.12 v 7.02 hours per week

respectively. This is a substantial difference and would suggest that it is highly unlikely that the students are able to achieve the level of output recommended by Swain (1990) and Nation (2013). This has serious implications for the quality of learning and will be discussed in the concluding chapter.

Vocabulary knowledge is key to a learner making progress along Krashen's natural order as outlined in *Theoretical Background 2.2.1 & 2.2.2*. Skjelde & Coxhead (2020) also point out that a number of studies have highlighted the increasing demand being placed on L2 English learners to have knowledge of academic vocabulary (see *Theoretical Background 2.2.2*). However, attainment of such vocabulary is not without its difficulties. The types of texts students choose to read outside of school is important since academic vocabulary is most prevalent in academic texts and to a lesser degree in non-academic texts such as newspapers (Skjelde & Coxhead, 2020). Again, students' exposure to such texts outside of school is highly unlikely. To what level the novels, short stories and newspapers adhere to comprehensibility and coverage of academic vocabulary, is also difficult to guide and assess. Graded Readers are useful here, but it is uncertain as to whether students necessarily know which level they are lying at, so it is difficult to make informed choices. For instance, surprisingly, Jane Austen's *Pride & Prejudice* and the *Hunger Games* have reportedly the same lexical signature (Coxhead & Walls, 2012).

Different kinds of texts have different vocabulary loads and learners need a certain level of vocabulary knowledge if they are able to access their content. Nation (2006) found that 98% coverage is reached for newspapers, novels, and university-level texts at 8,000–9,000-word families plus proper nouns. Whereas, Coxhead & Walls, (2012) discovered that TED Talks are closer to written texts in coverage, than for example films, and suggest that “EAP learners who know 5,000 word families might need scaffolding to support their listening to TED Talks” (p. 62). Knowledge such as this is useful for guiding both teachers and students in their choices. Novels read by the students included *Vanity Fair*, *The Picture of Dorian Gray*, *Pride & Prejudice* and *The Absolutely True Diary of a Part-Time Indian* amongst others.

The TV and Film viewing among the participants in the present study was an eclectic mix of light entertainment delivering, more likely than not, general vocabulary. More advanced as well as technical vocabulary was more likely encountered by students during their YouTube viewing. The students made a conscious choice to use YouTube in order to pursue independent language-learning opportunities.

During the school year, *The Absolutely True Diary of a Part-time Indian*, was assigned reading in class and for homework and is described by Jakobsen and Tønnessen

(2018) as being a “distinctively multimodal text” and “in terms of genre and form, the novel comes close to the students’ out-of-school textual world” (p. 43). This particular novel was chosen for these classes for similar reasons to those of *Diana*²⁷ in Jakobsen and Tønnessen’s (2018) study: primarily to increase motivation for extensive reading and cater to different learning styles. Feedback from the students was not formally collected, but students’ responses to various questions on the questionnaire, as well as informally in class, were positive about this book.

Since the present study was based on TAF students, technical vocabulary (see *Theoretical Background 2.2.2*) should be considered too, since the students will be exposed to this type of vocabulary in their workplace. To what extent students’ extramural reading exposes the students to English for vocational purposes EVP (see *Theoretical Background 2.2.2*) is difficult to decipher. Certainly, some students reported reading user manuals whilst at work. However, very few of the language diary students reported reading a vocational orientated text outside of work and school. Such texts are of obvious relevance to the students in their current workplace and also possible future studies and career if they stay in their chosen vocation. However, students did report watching vocational YouTube videos and surfing the Internet for information relating to their vocational course, work or other school subjects.

Although the five outliers in Garvoll’s (2017) master’s project reported a zero percent reading of novels, newspapers or articles extramurally, they did read other types of text according to Garvoll. She described the texts as being “digital and visual ones, like TV-series or movies, Internet (Facebook), musical lyrics, and online games”. She pointed out that the students were in fact reading, just not novels and newspapers. If we consider the discrepancy between the amount of time students in the present thesis recorded reading novels and short stories (ca. 0.2 hours a week) and the amount of time they recorded ‘reading’ in question 35 (ca. 6 hours a week), it is obvious that reading involves much more than just novels.

As Ørevik (2015, 2020) and Skulstad (2009) also point out, as discussed in *Theoretical Background 2.3.3*, genre patterns and the definition of communicative competence are changing in an ever-increasing networked society. Therefore, when assessing whether the participants are reading extensively or not, all types of texts should be considered whether they be classic novels such as *Pride & Prejudice*, read by Student Bb5, Manga comics read by Student Bb3 or the BBC news app read by Student Aa2.

²⁷ Diana is the name given to the teacher in their study.

What types of vocabulary the students are exposed to whilst reading these texts is perhaps an equally interesting question (see also *Theoretical Background 2.4*).

Finally, if we consider Nation's (2013) list of goals that are important in the language classroom other than vocabulary, such as cultural knowledge, then it becomes clear that this multimodal digital media space also has a role to play in language learning, in terms of giving the students an understanding of other cultures. Certainly, the YouTubers, TV and film choice of the students in this study suggest that there is cultural capital to be gained in their extramural activities and that this activity is relevant to their English language course. So, when considering whether students are exposed to extensive reading outside of school, there are many factors that need to be taken into account.

4.3.2.2 Film and TV-watching. Film and TV watching have long been recognised as popular as well as useful in terms of language acquisition (e.g. Olsson, 2012). In the present study, both Sets A and B preferred watching TV and films with Norwegian subtitles as opposed to with English subtitles or no subtitles at all. Österlund (2014) also had similar findings amongst Swedish 16-year olds regarding subtitle choice, in which her study group watched English language films and TV with Swedish subtitles. Similarly, Olsson (2012) recorded that the second most popular EE activity of her study group was watching English language TV programmes or films with Swedish subtitles: half of her study group reported watching such programmes or films every day.

A number of research studies have demonstrated that using L2 subtitles whilst watching L2 language TV and films is beneficial to L2 language learning (e.g. Berns, 2007; Winke et al., 2010). However, a study by d'Ydewalle and van de Poel (1999) found that having the L2 in the soundtrack with subtitles in the L1 is the most beneficial for L2 vocabulary acquisition (see *Theoretical Background 2.3.2*). Although taking account of the limitations of the Dutch study as outlined by Sundqvist and Sylven (2016), it could suggest that the preferred viewing of the study group – English soundtrack with Norwegian subtitles - is of benefit to their vocabulary acquisition, but perhaps not to their written production of texts.

The language diaries revealed that students liked to watch multiple episodes of a particular series, often within one week. Rodgers and Webb (2011) believed that this type of viewing enhanced the possibility of encountering the same vocabulary items several times, as compared to watching unrelated programmes, and that such multiple encounters would lead to learning gains.

4.3.2.3 Music. Listening to English language music proved to be one of the most popular EE activities and is perhaps not unsurprising with apps such as Spotify which give easy access to English language music 24/7. A number of other studies have reported similar findings (e.g. Lamb, 2007; Murray, 2008; Sundqvist, 2009). Österlund (2014, p. 13) reported that 88% of her study group listened to music every day and it was the most common EE activity and Olsson (2012, p. 35) recorded that all 37 pupils in her study group reported that they listened to music with English lyrics regularly: 86% of them every day. Sundqvist (2009) recorded an average of 6.58 hours a week listening to music in her study group.

Boys on average reported spending 5.12 hours and girls 7.52 hours a week (Appendix J) engaged in this activity and student Bb3 recorded listening to music for as much as 36.2 hours a week in their language diary (Table 4.4). When quizzed on this figure, student Bb3 said that they often listened to music whilst doing other things. This comment, in my mind, raises the question as to what extent this activity promotes subconscious language acquisition as outlined by Krashen's (1981) Comprehension Hypothesis (see *Theoretical Background 2.2.1*), or conversely to what extent the language content is being noticed as outlined by Schmidt (1990) (*Theoretical Background 2.2.1*). One should therefore be curious as to what extent the students are noticing the language deliberately or incidentally (see *Theoretical Background 2.2.1*), when listening to music and what aspects of the language they are noticing, especially if they are performing other tasks. More importantly, how does this noticing affect acquisition?

Nation (2015) believes that there are certain principles that should be adhered to in order to maximise learning outcomes. These principles include comprehensible input, quantity of input, opportunities for learning and maximising learning conditions. Some of these may be met whilst listening to music outside of school: quantity in some cases and to varying degrees comprehensible input. However, opportunities for learning and maximising learning conditions are unlikely to be met in an EE environment, but could during a teacher-led English lesson. This will be discussed further in Chapter 5.

4.3.2.4 YouTube. Watching YouTube videos was one of the most popular extramural English activities amongst the students and reflects findings in previous studies, such as Haugsbakken and Langseth (2014), who reported already in 2014 that half of the students in their study group ranked YouTube as the most important site that they visited every day. Ørevik (2014) reported YouTube as ranking second and third, respectively, among favourite websites for boys and girls in her study among 16-year-old

students, only being beaten by Facebook or Twitter. Of course, YouTube is, for many, primarily a viewing platform, but some students do create their own YouTube videos in English as well. The participants in the present study group were mainly focused on viewing.

Some students had a particular interest and used English language YouTube videos simply because there were more of them available. For example, student 16A was interested in motor mechanics and viewed a lot of English language videos to help them fix their engines. This particular student, incidentally, gave a presentation in English with ease on the combustion engine, which has a lot of difficult technical vocabulary. The reason being, they explained afterwards was that they had seen so many English language YouTube videos on the subject.

Interestingly, one student noted down in their language diary following YouTuber Jeremy Fragrance and added in brackets (bad English). Jeremy Fragrance is German and does not have English as a mother-tongue. It shows that the student had a sense of awareness regarding the quality and authenticity of the English they were exposed to. Of course, this raises all kinds of interesting questions, which will be addressed in the concluding chapter.

4.3.2.5 Gaming. The correlation between gaming and English proficiency has perhaps attracted the most attention (e.g. Sylven & Sundqvist 2012; Sundqvist & Wikstrom 2015; Reinders & Wattana, 2011; Brevik, 2016; Sletten et al., 2015) and highlights the impact this form of extramural English can have on L2 language learning (see *Theoretical Background* 2.3.2). Students on average in the present study group however, contrary to the perception of this generation as gamers, perhaps spent surprisingly little time gaming either online or offline relative to other activities. However, a number of them can be defined as frequent gamers (≥ 5 hours/week), according to definitions outlined by Sylven and Sundqvist (2014, p. 302). For example, Students 24a and 8a reported spending 15 hours or more a week gaming. Students 5a, 13b, 14b and 16b spent 7.5 hours or more a week gaming. Of course, the exact number of hours gaming is available in the language diaries, but not in the questionnaire. The diaries show that none of the students in the case study subsets appear to have a gamer-profile as defined by Brevik (2019) or Garvoll (2017, p. 52): “they participated in online games for several hours every day after school. Additionally, they actively participated in the game by using the written and oral chat functions”.

4.3.2.6 Gender Differences. A number of previous studies have found gender differences in the extent and type of EE (see *Theoretical Background 2.3.2*). Results in Appendix J, show that boys spent less time reading novels and short stories than girls: 0.24 and 0.52 hours per week respectively, but not a significant difference. Olsson (2012, p. 35) also found that reading books in English was more popular among the girls than the boys: 72% of the boys reported that they never read books in English outside of school and more than half of the girls reported that they read books in English on a weekly or monthly basis (see also Section 4.2.2).

4.3.2.7 Students' Views. The questionnaire revealed that students consider TV, film and YouTube as improving their English, more than typical classroom genres of short stories in textbooks for example. Previous studies report similar findings (e.g. Henry, 2014). They also felt that they learnt half of their English in extramural settings whilst at lower secondary school. Also, as Rindal and Piercy (2013) concuded in their study of L2 variation amongst Norwegian upper secondary school students, factors such as “media influence, language attitudes, and language choices”, were important (p. 224). These could also account for the students' attitudes towards using their own oral English in the L2 classroom. One of the main reasons that they found it stressful was because they felt they did not have full mastery, together with a fear of making mistakes (see Appendix M). To what extent they are comparing themselves to native speakers on the media should be considered. More research into the influence of media on Norwegian students oral English in a variety of respects is needed.

4.4. Research Question 2: *are there any easily identifiable patterns, primarily correlations, between the amount of EE and in-school achievements, within the student group as a whole or relating to gender differences?*

Research question 1.2 involved assessing as to whether there were any correlations between the amount of EE activities and in-school achievements. In-school achievements are being defined using proficiency test scores; mock exam essays; oral presentations and written report, based on a vocational theme and finally receptive/productive vocabulary tests. Details of analysis procedures can be found in *Methodology 3.2.1.3*.

4.4.1 Results

4.4.1.1 In-School Achievements. In-school achievements are outlined in the previous chapter (see *Methodology* 3.2.1.3). As mentioned previously (see Section 4.1), the data calculated using Set AB (Set A + Set B) provided a sufficiently large enough sample for correlation analysis. A summary of in-school achievements is outlined in Table 4.12 and Figure 4.6.

Table 4.12

Summary of In-school Achievements Expressed as Mean Scores (M)

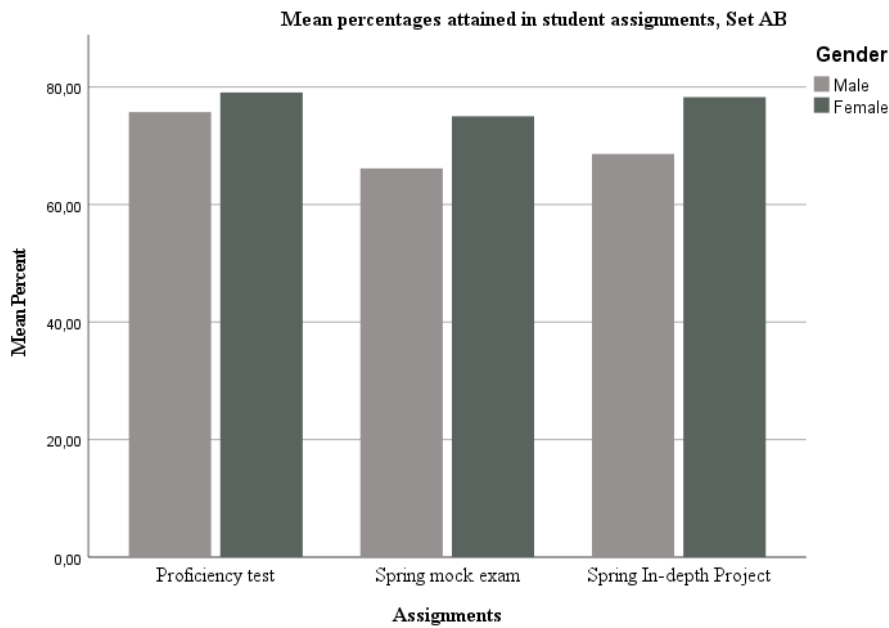
Participants	Mode	n	M	SD
Male	Proficiency test (/150)	18	113.61	
Female		23	118.61	
Female + Male		41	116.41	16.43
Male	Score spring mock exam %	19	65.25	
Female		23	75.01	
Female + Male		42	70.65	12.52
Male	Spring in-depth project %	19	68.00	
Female		23	78.30	
Female + Male		42	73.63	12.79

Note. *M* = Mean scores; *SD* = Standard Deviation

A summary of the gender differentiation within in-school achievements is shown graphically in Figure 4.6.

Figure 4.6

Gender Differences in Proficiency Test, Spring Mock Exam and Spring In-depth Project Results, Set AB



Note. Proficiency test scores are expressed as percentages in this instance.

Vocabulary scores are presented in Tables 4.13 and 4.14 and a more detailed breakdown of the vocabulary results is available in Appendix N. The average scores on the 2000-word receptive and productive vocabulary tests were 94.98 and 64.97% respectively. Boys scored 94.84% on the 2000-word receptive vocabulary tests compared to 63.05% on the productive. Girls similarly scored 95.09% on the receptive and 66.57% on the productive.

Table 4.13

Vocabulary Test Scores

Vocabulary test	<i>n</i>	<i>M</i> score/30	<i>SD</i>
2000-word receptive Score /30	41	28.49	1.76
4000-word receptive Score /30	40	23.53	3.53
2000-word productive Score /30 ^b	42	19.49	6.56
University level productive Score /30 ^b	42	7.21	4.57
Average score in vocabulary tests ^a	40	23.91	3.21

^a*n* = average of 2000-word receptive + 4000-word receptive + 2000-word productive test, scores out of 30

^b*n* = original scores for productive vocabulary are out of 18 (see Appendix N)

Vocabulary receptive and productive scores are taken from the 2000-word test. All tests refer to the average of the receptive and productive 2000-word test.

Table 4.14

Vocabulary Scores /out of 30

Vocabulary type	Male Set AB <i>M</i>	Male Set AB <i>SD</i>	Female Set AB <i>M</i>	Female Set AB <i>SD</i>
Vocabulary receptive 2000	28.45	2.07	28.53	1.49
Vocabulary productive 2000 ^a	18.92	6.43	19.97	6.77

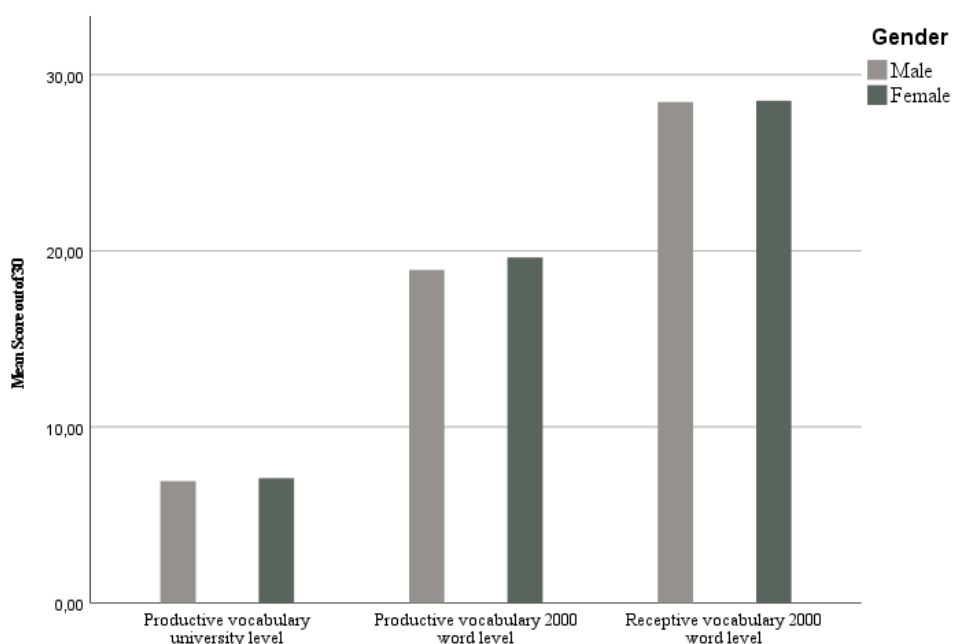
^a*n* = original scores for productive vocabulary are out of 18 (see Appendix N)

Productive vocabulary at the 2000-word level only gave a point if the student spelt the word correctly. The results revealed that in a number of cases the students were close to achieving the correct answer but had spelt the word wrong or it was in the wrong form. For example, one of the sentences was “In order to be accepted into the university, he had to im..... his grades. One student wrote: he had to *improv* his grades. Another example was the sentence “Teenagers often a..... and worship pop singers. “One student wrote “Teenagers often *admirer* and worship pop singers.”

There were similarities in specific writing errors amongst the students as well, such as ‘satured’ instead of ‘saturated’. This would suggest that the students were reasonably familiar with these words and could use them in an oral situation or understand them if they were reading a text, but found it more difficult to produce them correctly. Figure 4.7, shows the difference in receptive and productive vocabulary test scores.

Figure 4.7

Gender Differences in Vocabulary Test Scores, Set AB



A paired sample *t*-test was conducted on the means of the raw data vocabulary scores - receptive and productive - in Set AB (see *Methodology* 3.3.1 & Table 4.14), to establish if there was a significant difference in the mean scores of productive and receptive vocabulary knowledge for the students in the study group.

Table 4.15

Paired Sample T-test of Set AB (score /30)

Productive Vocab	Receptive Vocab	<i>t</i>	<i>df</i>	<i>p</i>
19.49	28.49	10.37	40.00	P<0.001

^a*n* = original scores for productive vocabulary are out of 18 (see Appendix N)

As Table 4.15 shows, there is a significant difference in the students' receptive and productive vocabulary. Students thus performed significantly better on the receptive vocabulary tests than the productive wherein they had to produce the words themselves.

4.4.1.2 Correlation between EE Extent and In-School Achievements: Analysis.

As outlined in *Methodology* 3.3.2, Pearson's correlation coefficient (*r*) is a statistical measure of the strength of a linear relationship between paired data. Table 4.16 presents

the variables that show correlation. Other correlations are presented in Appendix O. The strongest positive correlation was found between the extramural scores and language diary scores. A strong positive correlation was also found between the average of the 2000-word vocabulary tests and the proficiency test.

Table 4.16

Correlation Coefficients for Set AB Variables

Quantitative Variable	Quantitative Variable	Set AB
Average score of productive 2000-word vocabulary tests	Average score Proficiency test	$r=0.800$ (correlation is significant at the 0.01 level (sig 2-tailed = 0.000))
EE, hours per week Questionnaire (qu. 30)	Language diaries, EE hours per week	$\rho=0.700$ correlation is significant at the 0.05 level (sig 2-tailed = 0.016)

Note. ρ = Spearman's Rank; r = Pearson's Coefficient

Since the novels reported as reading material by the language diary students²⁸ (see Section 4.3.1) suggested a good level of vocabulary, I was interested to see if there was a correlation between students' university vocabulary scores and the reading of novels. The two students with the most advanced levels of vocabulary in their novels were both in the same class, Set B, so this group was tested for correlation between reading novels (numeric score) and scores in the university vocabulary level.

Table 4.17

Selected Pearson Rank Coefficients for Set AB and Set B Variables

Set	Quantitative variable	Quantitative variable	Correlation
B	University vocabulary level	Reading novels	$r = 0.650$ (strong correlation is significant at the 0.01 level)

Note. r = Pearson's Coefficient

Whilst it is accepted that the sample size is small ($n = 17$), there was a strong positive correlation between reading novels and the scores on the university vocabulary level test (Table 4.17).

4.4.1.3 Gender Differences, In-school Achievements. The study aimed to find out if there were any statistically significant gender differences, assuming equal variance. T -scores were calculated for those variables that suggested there was a difference as indicated by arithmetic mean, to calculate if the difference was significant and presented in Table 4.18.

²⁸ The students in question were often seen reading these novels in the classroom throughout the study period.

Table 4.18

Two-sample T-test to Determine any Statistically Significant Gender Differences in Relation to Different Variables

Participants	Variable	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Male	Average productive vocabulary 2000 word level scores ^a	19	18.92	6.43	-0.514	40	0.966
Female		23	19.97	6.77			
Male	Grade in Spring mock exam	19	65.25 %	13.00	-2.70	49	0.010
Female		23	75.01 %	10.43			
Male	Spring in-depth project	19	68.0 %	11.15	-2.81	40	0.008
Female		23	78.30 %	12.36			
Female		23	65.64 %	10.61			
Male	Proficiency test ^b	18	113.61	17.15	-9.66	39	0.340
Female		23	118.61	15.87			

Note. *M* = Mean scores; *SD* = Standard Deviation; *t* = *t* statistic; *df* = degrees of freedom; *p* = correlation

^a = Scores out of 30. ^b = Scores out of 150.

In most cases, a *p*-value of < 0.05 (5%) is accepted to mean the data is valid (see *Methodology* 3.3.1). As Table 4.18 shows, girls achieved significantly higher scores than the boys in the spring mock exam and in-depth project, but not in the proficiency test or the vocabulary test.

4.4.2 Discussion

As outlined in Chapter 2, a number of studies have found a positive correlation between EE exposure through gaming and vocabulary proficiency (Sylven & Sundqvist, 2012; Sundqvist and Wikstrom, 2015; Brevik, 2016). Some other studies have recognised a positive correlation between EE exposure in general and L2 English proficiency (Pickard, 1995; Olsson, 2011) and vocabulary proficiency (Sylven, 2010).

A similar finding was not established between the amount of EE as calculated from question 30 in the questionnaires and student achievements for this particular study group of upper secondary TAF students.

Interestingly, one of the strongest positive correlations was found between the average of the 2000-word vocabulary test and the proficiency test, with a coefficient of 0.800. This would suggest that vocabulary knowledge is a key factor in language proficiency, a view in fact that has been put forward by many scholars (e.g. Nation, 2013). Also, it seems that students who are reading novels which cover words at higher vocabulary levels also achieve better scores in the university vocabulary test. A higher score in the university test is secured because of a greater knowledge of academic

vocabulary. The EE activities of these particular students is therefore extremely interesting, because their EE choices outside of school could be having a direct impact on their language outcomes in terms of academic vocabulary knowledge. Other studies also seem to suggest that reading novels with a high-level of vocabulary can be an aid to knowledge of academic vocabulary (e.g. Coxhead, 2000, see *Theoretical Background* 2.2.3).

Findings show, in Table 4.12, that the girls on average scored higher than boys in all four assessments. Furthermore, statistical analysis shows that the girls achieved significantly higher scores than the boys in the spring mock exam and in-depth project. Previous studies report similar findings (see *Theoretical Background* 2.3.2). Bonnet (2004, p. 144), in his European report, mentioned in Chapter 2, found that the largest difference in terms of gender is seen in the written production of English, with a difference in average scores of 8.40% in favour of girls. Interestingly, the two written tasks had a much wider gender gap in this present thesis than the proficiency and vocabulary tests, which were partly receptive (see Table 4.15).

The spring mock exam, which was a student task that required five hours of formal writing, had a gender gap of 9.76%. In order to achieve a high score, it requires excellent fluency, accuracy, vocabulary, syntax, formal language, and complex sentences. In addition, the student has to be adept at structuring a text, in this case an essay. They also have to use information and sources that they have used throughout their English language course and communicate cultural knowledge. Reflection and critical thinking are essential.

The in-depth project gave the students a chance to showcase their oral skills, but did require some writing in the form of PowerPoint slides and a summary report. The students were asked to investigate and present a thesis statement within their vocation. Examples included²⁹: “Pacific Oysters: Nuisance or Resource?” and “Are students in this school sleep deprived?” The gender gap for this assignment was 10.30%. Interestingly, the proficiency test and vocabulary scores which focus on language skills alone, showed a much smaller gender gap (3.33% and 1.05% respectively).

It is difficult to make any specific assertions, but the language level alone did not explain the fact that the girls achieved higher scores in these two assignments. The girls in

²⁹ “What is the most popular fish to eat in Norway and is this reflected in the fish farming production: a survey amongst students in this school”; Female engineers in Norway: is there equality in the workforce in Norway?; CPR (Cardiac Pulmonary Resuscitation): will public awareness make a difference?” “The effect of social media in 2018 shown in a survey amongst teenagers at this school.”.

terms of the spring mock exam showed better cultural awareness and reflection. With respect to the in-depth project, on the whole the girls seemed to put more effort into their in-depth project than the boys and showed a clearer understanding of the issues involved, the assessment criteria and more enthusiasm in their data gathering.

This underlines that in-school achievements in English do not necessarily reflect the language ability of the student alone, it depends very much on the nature of the task. Dedication and motivation seem to play an important role in some tasks. In fact studies in Norway have also shown similar variations in the gender gap. Wider gender gaps exist in classroom assessment compared to national standardised examinations which are thought to be related to the stakes involved, whereby boys put less effort into classroom assessments than girls (see Borgonovi et al., 2018). Researchers also point out that teachers' grading of boys may not always reflect solely on the boys' performance in the test, but may also reflect on the teacher's perception of their overall learning level and behaviour in the classroom (see Borgonovi et al., 2018).

Also, these variations in gender gaps, depending on the type of task, might be a reflection of the gender differences in extramural activities, but as far as I am aware no research has been carried out looking specifically at this.

Bonnet (2004), as outlined in the introduction, found that Norwegian pupils seem to master the receptive skills, whilst scoring lowest in written English: tasks that required correct production and correct spelling scored the lowest. The scale of the difference between receptive and productive vocabulary scores, in the present study, was substantial, there being approximately a difference of 9 out of 30, or ca. 35%³⁰. Comparing these results to the amount of time students recorded in receptive versus productive activities extramurally (see Section 4.2.1), the results are not surprising. The students recorded a much higher exposure to receptive English than productive (Figure 4.1), which suggests they are improving these skills more. The old adage 'practise makes perfect' seems to apply here.

Interestingly, the results in Table 4.10 and Appendix Q show that the students consider their in-school English to be important for their spare time, future higher education and future employment. Students in Befring's (2004) study, in which she interviewed Norwegian students taking vocational courses at upper secondary level,

³⁰ The receptive and productive vocabulary scores of the students, are 28.49 versus 19.49 out of 30. Note - raw data scores for productive tests are out of 18 (see Appendix N).

largely thought their in-school English for vocational purposes (EVP) and general English were useful for their futures, including future occupation.

Interestingly, the students participating in the present study, felt that their in-school English was more relevant for their spare time than it was for either their future employment or higher education. This could reflect the content of English lessons as well as the vocabulary-focus. TAF classes are placed in the general studies curriculum rather than the vocational, and therefore focus is more heavily placed towards academic English and away from vocational, especially since the introduction of the new curriculum in 2020. Another consideration is that the goals of Befring's study group differ somewhat from this study group. Vocational students generally go onto an apprenticeship and future employment in the subject they study at upper secondary. TAF students, more often than not, go onto higher education and not necessarily in the subject that they had their apprenticeship in. This would also explain why they think English at school is more important for their Higher education than future employment (see Appendix Q).

4.5 Extramural English as a Concept

The results outlined in this chapter present a useful opportunity to revisit some of the concepts, discussed in *Theoretical Background 2.3.1*: setting, instruction, naturalistic and autonomous learning.

The setting³¹ for teacher-fronted formal instruction, less formal instruction and student-directed task-based activities took place for the most part in the classroom at the school. However, some tasks took place outside of the classroom within the school building and school grounds. The classroom itself as well as the school building, acted not only as a place for teacher-fronted learning, but during the breaks between lessons it was very much a social space for the students. A lot of the students used these breaks to engage in EE activities on their phones, computers or reading a novel. Outside of school

³¹ Setting: an arrangement for learning, involving one or more learners in a particular place, who are situated in particular kinds of physical, social or pedagogical relationships with other people (teachers, learners, others) and material or virtual resources.

Mode of practise: settings typically support a range of modes of practice: a classroom, for example, may support both teacher-fronted formal instruction, or less formal, student-directed task-based activities, just as a self-access centre might support individual self-directed use of self-instructional materials or group activities led by a teacher (p. 14). Benson (2011) see also *Theoretical Background 2.3.1*.

hours EE is much harder to define. During the school year the students had a number of assignments that they were expected to work with at home. This started as teacher-fronted instruction in the classroom, but responsibility then transferred to the student when they were out-of-school. This involved instruction and to some extent non-instructed, independent language learning on the student's part. The results show too that this was not limited to the English subject, but that the students were using EE to help them in their other school subjects.

Students were also involved in a lot of naturalistic and autonomous language learning, through their TV/film viewing, YouTube and gaming. Some of these activities also occurred through a self-directed motivation on the student's part to improve their English, or as part of a teacher-fronted instruction followed up at home. One student said that when using social media, they frequently looked up unfamiliar words in, for example an online urban dictionary.

The workplace³² as a whole presented very few opportunities for EE and if there was such activity, then it was not necessarily related to the workplace. Naturalistic and autonomous language learning occurred there too, through watching YouTubers in their breaktime or listening to music. However, under certain circumstances, such as having a non-Norwegian speaking colleague, then the students had to use a lot of English.

Evident, in this study group therefore, is the clear lack of a relationship between the locations of learning and locus of control. Furthermore, EE occurred in all locations including the classroom/intramural location and is therefore difficult to define with a high degree of certainty.

4.6 Summary of Findings

The students in the present study were on average involved in 37.71 hours of extramural English per week. The extent of how much EE students were involved in individually varied greatly. They were exposed to very little extramural English in their workplace and the gender gap is especially prevalent in terms of in-school achievements, reflecting European trends. The results suggest that the predominance of receptive English exposure extramurally may be reflected in the students' scores and views on intramural English.

³² Workplace: refers to the company that the student has their work placement as part of their TAF studies, or a casual job that is not related to their TAF studies, for example, singing assignments.

Students recognise the importance of being competent in English and interestingly, including in some extramural social settings. They seem to embrace using what is essentially an L2 language in social situations and very few of them are sceptical about the level of exposure they are now subjected to. Indeed, they are motivated to improve their proficiency in English.

Chapter 5: Conclusion

This concluding chapter starts out with a brief summary of the study before a synthesis of the main findings and an attempt is made to answer the research questions. Following this, the study's didactic and data collection considerations and limitations are outlined, with a closing section looking at suggestions for further research.

5.1 Summary and Conclusions

This study set out to investigate the extramural English activity of upper secondary school students in Norway, more specifically those taking TAF education. As outlined in *Methodologies* 3.1.1, an explanatory sequential design using a mixed methods approach was used. A study group of 42 students, from two consecutive classes, were asked to fill in a questionnaire and undertake vocabulary tests. The questions in the questionnaire were designed in order to collect background information; information on extramural English and also the students' views on their extramural and intramural English. Their scores from various school assignments were also collected. Two small case study groups were assigned from the two TAF classes and asked to fill in language diaries of their extramural English (EE) for at least seven days. The study was informed by a number of different, but interconnecting theory perspectives, all of which are outlined and reviewed in the *Theoretical Background* Chapter: second language acquisition (SLA), language beyond the classroom (LBC), multiliteracies and lexical knowledge.

5.2 Research Questions

5.2.1 Research Question 1.1: Are there any easily identifiable patterns in the extent of extramural English within the individual student groups, across the student groups or relating to gender differences?

The results show that on average students used 37.71 hours of EE per week. The 11 case-study students recorded an average of 25.45 hours per week of EE in their language diaries. It is apparent therefore, that the students in the present study group were using appreciable amounts of time engaged in extramural English – especially when considering the fact that the language diaries were recorded during a three-day school and two day work-placement week - but that this amount of time varied substantially across the study group. These results were largely in line with other studies such as Forsman

(2004) and Olsson and Sylven (2015), but higher than those of Sundqvist (2009) and Sundqvist and Sylven (2016).

The present study also found that the gender difference in the extent of EE was much narrower than in a number of other previous studies (e.g. Olsson, 2012). There was very little difference: the girls are as equally active as the boys. The students also recorded using very little EE at work.

5.2.2 Research Question 1.2: Are there any easily identifiable patterns in the types of extramural English within the individual student groups, across the student groups or relating to gender differences?

Similar to other studies (Sundqvist, 2009; Garvoll, 2017; Warnby, 2021) reading novels and short stories and newspapers outside of school was one of the least popular activities in the present study. However, the students were reading a variety of texts, other than novels and short stories, such as manga comics; English subtitles on TV and film; Twitter and Facebook. Music was one of the most popular choices, together with watching TV and films. Watching TV and films in L2 with L1 subtitles was the most popular viewing choice. The results also show that the students in the present study group were engaged in and exposed to a wide range of EE activities. As in previous studies (e.g. Sundqvist, 2009; Olsson & Sylven, 2015) results show that boys in the present study group were involved in gaming and YouTubing more than girls. In general, there were very few frequent gamers, with students showing a preference for other EE activities. In broad terms, none of the students fitted Brevik's (2019) gamer profile (see *Theoretical Background 2.3.2*), but both genders resembled her social media user and some, more especially boys, could be described as surfers, although defining students in terms of such profiles is far from straightforward.

Extramurally, results also show that receptive English in the form of listening and reading was more prevalent than productive English in the form of speaking and writing (see *Results and Discussion*, Figure 4.1). Students also reported that they found speaking and writing English the most difficult aspects of in-school English and gave their reasons as to why they found speaking English there so difficult. Overwhelmingly, the fear of making a mistake was cited as the main reason, together with 'poor pronunciation' and feeling stressed.

In-school, students find that receptive English in lessons, in the form of listening and reading, is much easier in comparison to producing English themselves, in the form of speaking and writing. There appears therefore to be a link between the students'

extramural and in-school English. However, to what extent the students' familiarity with receptive, as opposed to productive English, in an extramural setting is related to their perception of the difficulty of receptive versus productive in-school English, is difficult to quantify. There does seem to be some certainty that students find the easiest activities in their English lessons to be those that they have practised the most extensively extramurally, and in turn this evidence suggests that students' EE exposure seems to have a very real effect on students' attitudes to in-school English.

Although there was not a clear gender divide between the total extent of EE exposure, there were some differences in the extent with respect to the type of activities they were engaged in. Girls were for example reading more novels, short stories and newspaper articles. They were also listening to more music, watching more English language TV and films and using Messenger, Snapchat and other communication platforms more than the boys.

Gee's (2017) suggestion, as outlined in *Theoretical Background 2.3.1*, of dealing with spaces and groups as "squishy and not well-bounded," (p. 28) describes perfectly the situation encountered during the present study (see also Benson, 2011). The students were using EE in a variety of locations, including in the classroom, (outside of the English lesson), at work, at home, on the bus and many other locations. They were involved in self-instructed, naturalistic, autonomous, and independent language learning at these locations as well as following up teacher-fronted instruction from a variety of subjects, not just English. The students similarly engaged in self-instructed, independent and naturalistic language learning during English lessons at school.

5.2.3 Research Question 2: *Are there any easily identifiable patterns, primarily correlations, between the amount of EE and in-school achievements, within the student group as a whole or relating to gender differences?*

A positive weak correlation was identified between the amount of time students estimated they used on LSRW³³ extramural English and their proficiency scores as well as their average 2000-word level vocabulary scores. However, there was no correlation found between the scores relating to time spent on EE activities³⁴ and in-school achievements.

Findings in the present study, support those of previous studies outlining the gender gap regarding in-school achievements. Girls in the present study group achieved

³³ Question 35 in the questionnaire.

³⁴ Question 30 in the questionnaire.

higher scores than the boys, in all four assignments. The gender gap varied with the type of assignment. Those assignments focusing in large part on language – vocabulary and proficiency tests – had the narrowest gender gap. The vocabulary scores also showed that the students were able to achieve a significantly higher score in their receptive compared to their productive vocabulary tests. The results reflect European wide findings as outlined in *Theoretical Background 2.3.4*.

EE may have had an effect more generally on students' in-school achievements too, since both female and male students achieved significantly higher scores in their receptive vocabulary test compared to their productive vocabulary test. Once again, this confirms the gap between receptive and productive vocabulary knowledge. Additionally, there was a strong positive correlation between reading novels and the scores on the university vocabulary level test in Set B. In terms of in-school achievements, both female and male students scored highest in the proficiency test and lowest in the spring mock exam. They also scored higher in their in-depth project than their spring mock exam, which mirrors their observation that essays are harder to produce than a poster or PowerPoint presentation.

5.3 Didactic Implications

Norwegian schools' high level of autonomy in pedagogy, curriculum implementation and resource management make them a central actor in solving problems within schools, according to the OECD Pisa Report (see Borgonovi et al., 2018). Findings in studies such as the present thesis can therefore be a useful resource more especially for teachers on the frontline, but also for regional and national policy makers. The results in the present study highlight several didactic implications which will be discussed below.

As mentioned previously, the findings show that the students were involved in very little reading outside of school, which is in line with other studies (e.g. Hellekjære, 2008; Sundqvist, 2009; Warnby, 2021). The arguments for and against explicit instruction in the classroom versus implicit learning of language in an extramural setting, are outlined in detail in *Theoretical Background 2.2*. (e.g. Swain, 1990; Schleppegrell, 2004; Nation, 2013; Skjelde & Coxhead, 2020; Olsson, 2011; Sundqvist & Wikström, 2015; & Warnby, 2021). These two arguments are not mutually exclusive and judicious teacher-fronted instruction in the classroom could guide the students towards useful texts in their extramural locations, that would increase their L2 knowledge. If texts are thought of in terms of multiliteracies, then a variety of EE activities can be used. If reading is assigned

as a part of homework then there are a number of useful theories that the students could be made aware of, if conveyed in a simplified form. These include Krashen's *comprehensible input*, $i+1$ and the *noticing hypothesis* (Schmidt, 1990). Students' cultural awareness of English speaking countries could also be improved. For example, films that increase cultural awareness could be assigned as part of homework, or simply a list of suggested viewing during the school year, so as to encourage a good connection between EE activities and curricular work.

The Absolutely True Diary of a Part-time Indian, was assigned reading in class and for homework, and as mentioned in *Results and Discussion* 4.3.2.1, it is a multimodal text that was popular with the students. Previous research (see Jakobsen & Tønnessen, 2018), together with observations in the present thesis – albeit informal – give a clear signal that multimodal texts such as graphic novels and illustrated novels are an excellent way to encourage extensive reading. Finding ways to promote reading amongst students at upper secondary level is of paramount importance, if they are to improve their general, academic and technical vocabulary in preparation for higher education and/or work-life.

Given that music seems to be universally popular amongst students, it could be used more as a didactic tool in the English classroom. This could be in the form of implicit or explicit teaching. Helping the students notice the surface forms and grammar of the lyrics, is probably more useful than just playing background music. Since analysis of song lyrics can be used in many ways, including introducing students to literary devices, exploring a topical issue, or a more detailed study of grammar and vocabulary, many approaches can be taken. Music also lends itself to listening activities such as cloze tests and music videos that accompany the song add another layer of possibilities. Output can also be encouraged by having the students recite verses to one another for example.

As was mentioned in *Results and Discussion* 4.3.2.4, one student noted down in their language diary following YouTuber Jeremy Fragrance and added in brackets (bad English). This raises an interesting question of what constitutes 'authentic English'? Globally, mother-tongue English speakers are far outnumbered by those who have English as a second or foreign language and therefore students are perhaps more likely to encounter ESL, EFL and L2 English. Using YouTubers, for instance, with different varieties of English, could prove a useful tool when teaching this aspect of the curriculum.

The results suggest that high exposure to EE can be attributed to activities other than gaming and as such the teacher can encourage EE through a variety of activities that appeal to the individual student. It is important to find out what the students' EE habits are: a simple survey at the beginning of the year could prove invaluable. As Borgonovi et

al. (2018) outlined when addressing the gender gap (see *Theoretical Background 2.3.4*), providing male students with engaging and accessible reading materials is important to improve interest in reading and literacy skills. Amongst other things they suggest providing reading materials that are in line with their hobbies and interests. The survey may also highlight any ‘holes’ in the EE that could be filled-in in the classroom. For instance, the present study revealed a distinct lack of English in the workplace. A teacher could address this ‘hole’ by ensuring technical English knowledge was transferred to students in the classroom. The lack of productive English extramurally could be addressed by more explicit instructed focus on writing assignments in class. The survey would also help teachers plan assignments that may appeal to the class as a whole. For example, if the majority of the class plays Minecraft, then an assignment could be designed around this.

The variation in EE activity within the study group was substantial. For example, a student in Set B recorded as little as seven hours exposure to EE in a week which is relatively low compared to the mean value of 37.71 hours. If a similar pattern in the variability of exposure represents a nationwide picture, then this begs the question as to whether some students are under-exploiting opportunities to improve their English outside of school? The survey mentioned above would help teachers identify any students in this category.

The students themselves reported, during informal feedback³⁵, that the questionnaire³⁶ was a useful form of self-assessment. Taking time to sit and reflect on their own individual EE was revealing to some. Additionally, they particularly enjoyed doing the vocabulary tests, especially going through the answers. The feedback suggests therefore that a simple survey and vocabulary tests could be incorporated easily and successfully into lessons. Both would be beneficial to the students and assist the teacher in forward planning. By taking vocabulary tests the students can be made aware of the different types of vocabularies and the best sources to find them in.

Lastly, as mentioned in the *Introduction* Chapter, there are many scholars that have argued that English today in Norway has functions for its speakers that exceed those of its official EFL status (see Brevik & Rindal, 2019). The extent of EE activity for a large proportion of the students in the present study would support this.

³⁵ Feedback was given informally and orally by the students, during English lessons.

³⁶ Questionnaire and survey are considered synonymous.

5.4 Data Collection Considerations and Possible Limitations

There is a discrepancy in EE estimates based on questions 30 and 35 in the questionnaire (Table 4.1) and the language diary recordings made by Subsets Aa and Bb (Table 4.2). It shows that different data gathering tools resulted in dissimilar findings. However, differences in the data gathering methods should be taken into account when considering this discrepancy (see *Methodologies* 3.3.4 & 3.3.4). The language diary students, for instance, constitute only a small proportion of the main study sample ($n = 11$) compared to the questionnaire participants ($n = 42$). Also, the scales used for questions 30 and 35 are different, making comparisons difficult and lastly, measuring the total amount of EE was not the main purpose of question 35 (LSRW), unlike question 30.

However, although care should be taken when comparing these methods, it does nonetheless, present an opportunity to reflect on different data gathering techniques. It is difficult to say with any certainty which method of data collection, out of the three mentioned, can be considered the most valid and reliable for calculating EE. The questionnaire estimates offer a general approximation and rely on the students' ability and willingness to give an accurate picture of their EE. It is challenging to estimate how much time a week you spend on a certain activity if you have not made a concerted effort to keep a record of it, since time is notoriously difficult to estimate. It could be argued therefore that the language diaries present a more detailed and accurate representation of EE and have the advantage of generating continuous data. Students were asked to consider how they could best record accurate information in their diaries before they started them. A suggestion was that they recorded exposure times in the evening of every day. Some students said afterwards that they had found it useful to jot down exposure during the day on their mobile phones and write it up in the evening. This of course will provide a more accurate picture than the questionnaire.

Language diaries, however, offer a very limited window into the student's everyday life and the seven days recorded may not be a typical week in the student's year. Also, it is important to consider that the questionnaire results are based on a broad timespan in the students' school year, including holidays, whereas the language diaries were based on a week that included three days at school and two days on work placement. This may account, in part, for the difference in EE scores between the two. Using my teacher's intuition, two out of the 11 language diaries surprised me, with how little EE the student had recorded. Ideally, I would have liked to have followed these students up with detailed interviews. As one of these students commented to me, that particular week was

unusual for them because they had had to spend a lot of time babysitting, so had been exposed to much less extramural English than usual. Although a number of students filled in ten days or more, the lowest common denominator had to be used for data analysis and that was seven days (see *Methodology* 3.2.1.2).

Most of these case-study students had estimated more EE hours in question 30 of the questionnaire, than they had noted in their language diary. In general, the more hours of EE the wider the discrepancy, confirming that estimating high levels of EE, accurately, is challenging.

Question 35 (LSRW) gives a valuable insight into the relative amount of receptive and productive English that students are engaged in and exposed to extramurally but does not appear to act as an accurate indicator of the amount of EE activity.

Errors can never be totally eliminated, either from the students themselves, or in the analysis of data. One language diary in Set A, for instance, had to be discounted because the student had forgotten that they were recording EE and instead recorded all of their extramural activities including the times that they used Norwegian. The error was thankfully discovered when I quizzed the student about their recordings. In fact, being teacher as a researcher which is discussed in *Methodology* 3.5 had many advantages. Follow-up was quick and effective. You were on hand to answer any queries when students were filling in questionnaires, language diaries and doing vocabulary tests.

Outliers nearly always exist in data sets and this data set was no exception. A judgement call has to be made as to whether to eliminate them. All the data has been kept intact, but an outlier in Set A requires a mention. Student 24 estimated using 102.94 hours per week which was nearly twenty hours more than the next highest estimate. The student had estimated that they used more than ten hours per week in a variety of activities: gaming online, gaming offline, listening to music and on YouTube - as well as being engaged in a number of other EE activities for between one to five hours a week. When the student was quizzed, they were adamant that they spent that amount of time on those activities. The data was left in but can be considered a likely overestimate. This does however, serve to reinforce the point that it is perhaps too easy for students to overestimate when there are so many variables to consider.

Recommendations for future studies would be to use both a questionnaire for a large data set, together with language diaries of a case study group taken from the main data set. A balance needs to be struck when designing the survey, with simplicity in mind in order to reduce the chances of overestimation but detailed enough to help students give accurate responses. An idea might be to tell the students a week in advance that they will

have a survey so they could be more aware of, and perhaps make a note of, their activities during that particular week before they took the survey: thus ensuring a more informed response. The categories also need to be well-defined with clear divisions and more scope for students to write down in more detail their use of EE. Care needs to be taken with formulation of the questions in the questionnaire and the time intervals used. It is also recommended that the questionnaire designer is in place when the students are filling in the questionnaire. Any queries can be taken up with the whole class as they are filling in and curtail any misunderstandings. Lastly, where feasible, use follow-up interviews with the students immediately after the questionnaires to eliminate any likely erroneous answers. The language diaries should cover a period of two weeks and if possible, collected at more than one point during the year and ideally including a holiday week, if feasible.

Since students seemed to have most problems with accurate recall when on apps that they dipped in and out of throughout the day and used English and Norwegian interchangeably - such as Snapchat, as discussed in *Methodology* 3.6 - perhaps the unrelenting increase in technological sophistication can help. Mobile phones that can accurately log how much time is spent on particular application and in which language, could help the students fill in questionnaires and language diaries more accurately.

Lastly, the students' language diary results do show a strong correlation with the question 30 (questionnaire) results (see Appendix P), which suggests they are reliable as data gathering tools towards the investigation of EE (see *Methodology* 3.4).

5.5 Future Research

There needs to be more quantitative and qualitative data collected on EE activities of Norwegian upper secondary level students, in general, together with more nuanced case-studies. Empirically based studies investigating EE patterns in vocational, general study and TAF classes would provide meaningful data and collection of data that directly links specific aspects of L2 in an extra- and intramural setting is also required. Lastly, students' views should be sought.

The role of schools in developing students' knowledge of different vocabularies is one of the key issues that has emerged during the present study. This appears to be true for all types of English including academic, general, technical and that typically used by teenagers in social media, surfing and gaming settings. Helping students improve their knowledge of academic vocabulary is particularly important in a study group such as TAF

and other general study courses, since many will go on to higher education. The present study suggests that most students are unlikely to acquire academic vocabulary during their EE activities. The exception in the present study group seems to be a small number of students, who because of their reading habits, could be expected to acquire a good level of academic vocabulary in EE. More research is needed to be able to make any specific assumptions and establish students' acquirement of various vocabularies in an EE setting.

Academic vocabulary is important for students going on to higher education, but apprentices with good English language skills are also necessary if Norway is to compete in a global market. The results in the present study show that there was very little EE used by students in their workplace. There needs to be much more collaboration between the school and workplace in terms of English language development. Of course, a focus on academic together with technical vocabulary makes TAF an interesting class to study. Vocabulary tests assessing vocational vocabulary and vocabulary typical of social media and gaming for example, could be interesting alongside the general English and academic ones.

There are very few studies linking empirical evidence of specific listening, speaking, reading and more especially writing skills used in EE settings, with students' proficiencies in school. In order to facilitate this research, linking specific elements of extra- and intramural English, indicators that can be measured successfully in both settings need to be identified and therein lies the main challenge as outlined in *Theoretical Background 2.2.4*. Using vocabulary knowledge, however, seems to be relatively straightforward. The results in the present study show a significant difference in the students' receptive and productive vocabulary knowledge in school assignments. Research into EE activity could help identify possible sources of receptive and productive vocabularies and in-turn understand the disparity. This information could then be used to try and promote productive vocabulary knowledge in-school. For example, using knowledge of the type of literacies the students are using extramurally, could help improve their intramural reading proficiencies and written skills.

Interestingly there was a lack of scepticism amongst the students in the study group towards their high levels of EE exposure. They seem to positively embrace it and are motivated to improve their language skills so they can participate more effectively, especially in social activities. It does beg the question as to whether this trend will continue, or whether it has a saturation limit? More profoundly, what are the implications for the Norwegian language?

Perhaps one of the most prevalent considerations is, to what extent a teacher should impinge on students' extramural activities and whether students welcome the idea of being guided in how to capitalise on their EE in terms of L2 language development. Students perhaps wish to protect their extramural environment from any form of learning and keep it purely for entertainment. A further consideration is to what extent students want their in-school English to incorporate elements of their EE. More research is needed, using for example, interviews with students and questionnaires.

In conclusion, there are so many interesting questions that remain unanswered, and it is the hope that this study contributes in a small way towards encouraging much more research in this field in Norway, more especially large-scale empirical studies as well as more nuanced case-studies of upper secondary school students and their extramural English.

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Appendix A

NSD letters of consent

Document A1: NSD Vurdering

Vår dato: 14.02.2018

Vår ref: 58356 / 3 / EPA

Deres dato:

Deres

ref:

Vurdering fra NSD Personvernombudet for forskning § 31

Personvernombudet for forskning viser til meldeskjema mottatt 13.01.2018 for prosjektet:

58356	Extramural English activities of upper secondary school students and its impact on writing skills
Behandlingsansvarlig	Universitetet i Bergen, ved institusjonens øverste leder
Daglig ansvarlig	Aud Solbjørg Skulstad
Student	Alison Rød

Vurdering

Etter gjennomgang av opplysningene i meldeskjemaet og øvrig dokumentasjon finner vi at prosjektet er meldepliktig og at personopplysningene som blir samlet inn i dette prosjektet er regulert av personopplysningsloven § 31. På den neste siden er vår vurdering av prosjektopplegget slik det er meldt til oss. Du kan nå gå i gang med å behandle personopplysninger.

Vilkår for vår anbefaling

Vår anbefaling forutsetter at du gjennomfører prosjektet i tråd med:

- opplysningene gitt i meldeskjemaet og øvrig dokumentasjon
- vår prosjektvurdering, se side 2
- eventuell korrespondanse med oss

Vi forutsetter at du ikke innhenter sensitive personopplysninger.

Meld fra hvis du gjør vesentlige endringer i prosjektet

Dersom prosjektet endrer seg, kan det være nødvendig å sende inn endringsmelding. På våre nettsider finner du svar på hvilke [endringer](#) du må melde, samt endringsskjema.

Document A2: Consent letter to parents and students, NSD

Vil du delta i forskningsprosjektet

Extramural English at Upper Secondary School, Norway

Dette er et spørsmål til deg om å delta i et forskningsprosjekt hvor formålet er å finne ut om engelsk elevane bruke utanfor engelsk timane. I dette skrivet gir vi deg informasjon om målene for prosjektet og hva deltakelse vil innebære for deg.

Formål

Eg studerer til master i engelsk med didaktikk (undervisning) på UiB. I samband med Masterarbeidet mitt ynskjer eg å utføre eit forskingsarbeid som masteroppgåva skal byggje på. Bakgrunnen for valet av temaet for masteroppgåva kjem av at eg underviser engelskfaget på skulen, og mitt arbeid som FYR-koordinator i fylket. Da eg var FYR koordinator, blei eg heldig nok til å høyre ein del forelesing om 'extramural English' (det vil seie engelsk som elevane bruker utanfor engelsk timane) av Lisbet Brevik (Universitet i Oslo). Dessutan veit eg ifrå samtaler med elevane mine at dei brukar stadig meir engelsk utanfor skulen. Eg gjennomførde ei pilotstudie innanfor engelskfaget i 2017, der elevane i ein annn klasse blir spurt om extramural engelsk: veldig interessant! Temaet for masteroppgåva mi er derfor 'extramural English'.

Hvem er ansvarlig for forskningsprosjektet?

Veilederen min er Prof. Skulstad, (avdelings leirar, engelsk didaktikk), UiB og semesteroppgåva mi som var ei 'pilot study' av denne hovud oppgåva fikk A, nå i hausten. Rektoren og skulen har godkjent forskinga.

Hvorfor får du spørsmål om å delta?

Sidan det er veldig lite data/informasjon tilgjengeleg angående 'extramural English' i Noreg vil eg forsøke å finne ut i kva grad vg1 TAF elevar: (1) brukar engelsk utanfor skulen, (2) opplever at engelskfaget på skulen er relevant for det yrket/høgare utdanningen dei tenkjer seg ut i etter skulegangen og (3) om 'extramural English' påverkar skriftlig engelsken deira.

Det er ein del grunner for at eg valde TAF klassen:

TAF faget er krevande. Forventning er at desse elevane skal vidare til høgare utdanning og derfor trenger akademisk engelsk (forskning viser at studentar på høgare utdanning må ofte lese mye engelsk (ca. 75%)). På Same tid må desse elevane samle yrkesretta vokabular (ESP – English for specific purposes).

Klassen er 50:50 gutar og jenter. Forsking vise stor forskjell i 'extramural English' mellom gutar og jenter i andre land f.eks Sverige.

Engelsk nivået i klassen er veldig bra og synes eg at dette skal hjelpe elevane med eige vurdering av engelsk kunnskapane sine.

Ikkje minst, elevane er veldig grei, snill og motivert.

Hva innebærer det for deg å delta?

Elevane vil få eit elektronisk spørjeskjema med 50 spørsmål. Spørjeskjemaet inkluderer desse 3 spørsmål, og dei er: foreldrenes engelsk utdanning, foreldras påstand til engelsk som fag og om eleven kommunisere med nokon utanfor skulen (engelsk) som kan inkludere familie.

I tillegg vil eg spørje nokre elevar om å fylje ut ei språk dagbok i sju/ti dagar (sjå vedlegg). Eg trenger 3 gutar og 3 jenter, og dei skal få ei lita belønning (f.eks, gåvekort eller T-skjorte frå Harry Potter Film Studio). Dei kan gi beskjed til meg om dei er interessert. Eg skal intervjuje nokre elevar om nødvendig som oppfølging av dagbøkene. Det er spennande å bidra til eit forskning felt i Noreg som manglar informasjon og data.

Eg skal bruke nokre av det skriftlege arbeidet frå elevane til å vurdere om 'extramural English' har ei påverknad på elevens skriftlege ferdigheitar. Forsking har vist at 'extramural engelsk' påverkar munnleg, lytting og lesing på ein positiv måte og er ei av grunnane for at elevane i Noreg klarer seg fint i leseprøver (engelsk) samanlikna med andre europeiske land. Ingen har sett på skriftleg arbeid, men me veit frå den europiskerapporten at skriftlig engelsk er den ferdigheita som norske elevar strever med mest. Eg veit også at TAF elevane har det travelt så eg vil ikkje at dette skal gå utover elevane sitt vanlige engelsk arbeid i timane, så eg kommer til å bruke dei innleveringane som er ein del av engelsk faget.

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. Alle deltakere kan trekke seg så lenge at studien pågår utan grunn. Det vil ta om lag 45 minutt å gjennomføre undersøkinga som vil foregå i vår 2018. Behandling av data vil foregå konfidensielt og i tråd med Norsk Senter for forskningsdata AS sine retningslinjer.

Ditt personvern – hvordan vi oppbevarer og bruker dine opplysninger

Vi vil bare bruke opplysningene om deg til formålene vi har fortalt om i dette skrevet. Vi behandler opplysningene konfidensielt og i samsvar med personvernregelverket. Alle elevane og skulen blir anonymiserde i publisert mastergraden. Alle data/informasjon ligger sikra på It's-Learning som vanlig. Prosjektsslutt er 02.01.2020 og alle datamaterialet anonymiseres innen denne dato.

Hva skjer med opplysningene dine når vi avslutter forskningsprosjektet?

Opplysningene anonymiseres når prosjektet avsluttes/oppgaven er godkjent, noe som etter planen er *våren 2020*.

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, og

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:

Prof. Aud Skulstad, (avdelings leirar, engelsk didaktikk), UiB

Hvis du har spørsmål knyttet til NSD sin vurdering av prosjektet, kan du ta kontakt med:

NSD – Norsk senter for forskningsdata AS på epost (personverntjenester@nsd.no) eller på telefon: 55 58 21 17.

Med vennlig hilsen

Alison Jones Rød

Aud Skulstad

(Forsker/veileder)

Samtykkeerklæring

Jeg har mottatt og forstått informasjon om prosjektet [*sett inn tittel*], og har fått anledning til å stille spørsmål. Jeg samtykker til:

At barnet vårt delta i dette forskingsarbeidet

Eleven sitt navn og foreldre (skriv under)

Eleven. Eg kunne tenkje meg å skrive språk dagbok (sjå vedlegg for å finne ut korleis dette ser ut)

.....

Dato.....

Document A3: Consent letter for in-school grades

Hei igjen!

Ifølge Norsk Senter for forskningsdata AS, personvernombudet forutsetter at eksplisitt samtykke må innhentes til bruk av elevenes karakter i masteroppgaven min. Karakterane som eg ynskjer å bruke er:

Kartleggings resultantar frå september 2017/2018

Tentamen karakter som elevene fikk i desember 2017/2018

Fordjupnings prosjekt vår 2017/2018

Sidan elevene har fått desse karakterane allereie, forsikrar eg at karakterane har ikkje blitt påverka av prosjektet. Dei andre data som blir innhenta handlar om teksten³⁷ og skal analysere etter skuleslutt. Som eg nemnte før, datamaterialet anonymiseres ved prosjektslutt 02.01.2020. Alle data blir behandla i tråd med Universitetet i Bergen sine retningslinjer for datahandtering og informasjonssikkerhet.

Det blir ingen identifiserbare opplysningar i mastergraden min. Eg er oppmerksom på at skulen, klassen, arbeidsplassane og elevene blir umulig å identifisere. Reglene er forståelig veldig strenge, og etiske overveielser er på dagsorden i prosjektet mitt.

Eg vil understreke igjen at prosjektet er heilt frivillig å delta i, og det vil ikkje få nokon konsekvensar om dei ikkje ynskjer å delta i prosjektet. Dei skal ikkje føle press til å delta på grunn av at eg er læraren deiras. Om de har spørsmål så kan de ta kontakt med meg eller veilederen min.

Mvh

Alison Jones Rød

Veilederen min: Aud Solbjørg Skulstad

Sydnesplassen 75007 Bergen

³⁷ Lexical sophistication, lexical diversity, lexical errors and formulaic competence

Appendix B

Letter to the school's headmaster seeking approval for the project

13. januar 2018

Hei [REDACTED].

Eg studerer til master i engelsk med didaktikk på UiB. I samband med Masterarbeidet mitt ønskjer eg å utføre eit forskingsarbeid som masteroppgåva skal byggje på. Bakgrunn for val av tema for masteroppgåva kjem av det at eg underviser engelskfaget på skulen og mitt arbeid som FYR-koordinator i fylket. Da eg var FYR koordinator, blei eg heldig nok til å høre ein del forelesning om 'extramural engelsk' (det vil sei engelsk som elevene bruker utanfor engelsk timene) av Lisbet Brevik (UiO). Dessutan veit eg ifrå samtaler med elevane mine at dei brukar stadig meir engelsk utanfor skulen. Eg gjennomførde ei pilotstudie innanfor engelskfaget i 2017, der elevane i ein klasse (Internasjonal engelsk) blir spurt om extramural engelsk: veldig interessant! Temaet for masteroppgåva mi er derfor 'extramural engelsk'.

Sidan det blir veldig lite data/informasjon angående extramural engelsk i Noreg vil eg forsøke å finne ut i kva grad vgl TAF elevar: (1) brukar engelsk utanfor skulen, (2) opplever at engelskfaget på skulen er relevant for det yrket/høgare utdanningen dei tenkjer seg ut i etter skulegangen og (3) om 'extramural engelsk' påverkar skriftlig engelsken deres.

Elevane vil få eit elektronisk spørjeskjema med 50 spørsmål.³⁸ I tillegg vil eg spørje noen elever om å fylle ut ei språk dagbok i ti dagar. Eg trenger 3 gutar og 3 jenter og dei skal få ei liten belønning (f.eks. gavekort eller T-skjorte frå Harry Potter Film Studio). Dei kan gi beskjed til meg om dei er interessert. Eg skal intervjuje nokre elevar om nødvendig som oppfølging av dagbøkene.

Eg skal bruke noen av skriftlig arbeid frå elevane til å vurdere om 'extramural' engelsk har ei påverknad på elevens skriftlege ferdigheitar. Forsking har vist at 'extramural engelsk' påverkar munnleg, lytting og lesing på ein positiv måte og er ei av grunnane for at elevane i Noreg klarer seg fint i leseprøver (engelsk) samanlikna med andre europeiske land. Ingen har sett på skriftleg arbeid. Eg vil ikkje at dette går utover eleven sitt vanlige engelsk arbeid i timane, så eg kommer til å bruke dei innleveringane som er ein del av engelsk faget.

Det er ein del grunner for at eg valde TAF klassen:

TAF faget er krevande. Forventning er at desse elevane skal vidare til høgare utdanning og derfor trenger akademisk engelsk (forsking viser at studentar på høgare utdanning må ofte lese mye engelsk (ca. 75%)). På Same tid må desse elevane samle yrkesretta vokabular (ESP – English for specific purpose).

Klassen er 50:50 gutar og jenter. Forsking vise stor forskjell i extramural engelsk mellom gutar og jenter i Noreg.

Engelsk nivået i klassen er veldig bra og synes eg at dette skal hjelpe elevane med eige vurdering av engelsk kunnskapane sine.

Ikkje minst, elevane er veldig grei, snill og motivert.

Difor lurar eg på om de kunne tenkje dykk å la VG1 TAF elevar på skulen delta i dette forskingsarbeidet? Det vil ta om lag 45 minutt å gjennomføre undersøkinga som vil foregå i vår 2018. Dei 6 elever som fyller ut ei dagbok tar litt ekstra tid, derfor får dei belønning. Eg sender ut brev til foreldrene/elever også som du kan kikke på om du vil og samtykkeskjema. Undersøkinga vil vere frivillig å delta på. Behandling av data vil foregå konfidensielt og i tråd med Norsk Samfunnsvitskapleg Datateneste sine retningslinjer. Alle elevane blir anonymiserde i publisert mastergraden. Alle data/informasjon ligger på It's-Learning.

Veilederen min er Aud Solbjørg Skulstad, Prof. i engelsk didaktikk (head of department), UiB. Semesteroppgåvet mitt som var ei pilot study av dette fikk A. Eg gleder meg til å begynne.

Ta kontakt for spørsmål.

På førehand takk for hjelpa!

Med venleg helsing

Alison Rød

³⁸ Spørjeskjemaet inkluderer 3 spørsmål, og dei er: foreldrenes engelsk utdanning, foreldra påstand til engelsk som fag og om eleven kommunisere med nokon utanfor skulen (engelsk) som kan inkludere familie.

Appendix C

Elicitation test: Hasselgren, A. (1994)

Elicitation test - tasks A, B and C

TASK A: Translate the Norwegian word in brackets to fill the spaces

1. It was her (ønske) that the money should be (gitt) to charity.
2. The offer has been (utvidet) again to cover all goods over ten pounds.
3. There has been a(n) (ønske) from some viewers for the
4. The management can (love) that the situation will not
5. The metal has been (utvidet) by the heat.
6. I can (love) you a nice surprise.
7. He (samlet) souvenirs from all round Europe in that room.
8. He has (samlet) all the children around him to read them a story.

TASK B: Put in any word or phrase that 'strengthens' the word in bold print

1. Whatnonsense!
2. This isbliss!
3. The party was a(n) success.
4. Milk issubsidised.
6. His leg was bleeding
7. The roof was leaking
8. She apologised
5. 50 people werewounded.

TASK C: Find a verb

1. It is important toyour national identity.
2. He hasa reputation as a playboy.
3. She phoned toher sympathy.
4. He has treatment for his ulcer.

Verbs supplied in Task C by Norwegian and British students:
(‘others’ refers to verbs supplied by only one informant)

Appendix D

Proficiency Test: Kartleggeren

Hva inneholder testene?

NORSK / ENGELSK

Språktestene har samme oppbygning. Alle delprøver begynner med at elevene gjennomgår en demooppgave, som er en forkortet utgave av selve delprøven.

Leseferdighet

Ordbilder: Eleven får vist et ord i kort tid og skal deretter velge hvilket ord som ble vist blant 5 ord som ligner hverandre.

Skanning: Eleven skal søke gjennom en tekst etter et bestemt ord og klikke på alle linjene som inneholder ordet. Kun ordets eksakte form og stavelse regnes som korrekt.

Skumming: Eleven skal raskt lese gjennom en tekst med fokus på å huske innholdet. Når teksten er forsvunnet, får eleven fire flervalgsoppgaver om innholdet i teksten.

Leseforståelse 1: I denne deltesten skal eleven lese en tekst linje for linje med fokus på å huske innholdet. Eleven bestemmer hvor raskt teksten skal vises. Kun 1 rad om gangen vises tydelig. Når teksten er forsvunnet, får eleven fire flervalgsoppgaver om innholdet i teksten.

Leseforståelse 2: Denne deltesten ligner den forrige, men hastigheten teksten vises med, styres av programmet. Når teksten er forsvunnet, får eleven fire flervalgsoppgaver om innholdet i teksten.

Rettskrivning

Diktat: Eleven får høre en setning fulgt av et ord i setningen som skal skrives. Ordet må staves helt korrekt.

Skrivemåte: Eleven leser en tekst der enkelte ord er utelatt og skal velge korrekt stavet ord fra en nedtrekksliste med 2 til 4 alternativer.

Finn feilen: Eleven skal lese en tekst og merke linjer som inneholder ord med stavfeil.

Ordforråd

Synonymer: Eleven får to lister med 10 ord i hver. Ved å klikke på ord i høyre og venstre liste skal eleven finne ord som betyr det samme eller tilnærmet det samme.

Antonymer: Eleven skal skrive ord som betyr det motsatte av ordene de får vist i oppgaven. En del skrivefeil vil bli godtatt, siden det er ordforrådet som testes og ikke rettskrivningen.

Fremmedord (eng. ordvalg): Dette er en luketest der eleven skal klikke på et ord og velge riktig plassering (luke) i teksten.

Ordene settes inn i teksten om eleven velger riktig luke.

Ordvalg: Noen viktige ord er utelatt fra teksten. Eleven velger rett ord fra en nedtrekksliste, slik at teksten gir mening.

Appendix E

Questionnaire Template

The questionnaire was given to the students digitally via It's-Learning. A simplified representation is provided below. Wherever relevant, further details of certain questions are given throughout the thesis.

Sp.	Sp. type	
1	Spørsmål til open undersøking	Kva er morsmålet ditt?
2	Fleirvalsspørsmål	Har du gått på engelskspråkleg skule tidlegare?
3	Fleirvalsspørsmål	Jente eller gut?
4	Fleirvalsspørsmål	Kva klasse?
5	Spørsmål til open undersøking	Kva programfag går du på?
6	Fleirvalsspørsmål	Kva årssteg?
7	Spørsmål til open undersøking	Har du ein jobb utanom skule? Skriv kva for ein type jobb. Praksis (knytta til programfag), eller noko annet som i ein butikk/bensinstasjon. Kva dagar er du på jobb. Om nei, gå vidare til sp. 13
8	Fleirvalsspørsmål	Når du er på jobb/praksis, kor mykje engelsk brukar du? Inkl. alle slags engelsk ikkje berre yrkesretta. Veldig mykje (>10 timar i veka) Mykje (5-10 timar i veka) Ganske mykje (1-5 timar i veka) Ganske lite (<0,5-1 time i veka) Veldig lite (>0-0,5) Ingenting
9	Fleirvalsspørsmål	Når du er på jobb/praksis, kva brukar su yrkesretta engelsk til?
10	Spørsmål til open undersøking	Om det er noko annet ifm sp. 8 + 9, skriv det her.
11	Fleirvalsspørsmål	Når du er på jobb/praksis, kva brukar du generelt engelsk til (kvardags engelsk). Dvs, ikkje yrkesretta engelsk.
12	Spørsmål til open undersøking	Om annet, skriv det her...
13	Ja/nei-spørsmål	Har du reist utenlands og du måtte bruke engelsk? Om nei gå vidare til sp. 16
14	Spørsmål til open undersøking	Om ja, kor?
15	Fleirvalsspørsmål	Kor lenge har du vært i desse land til sammen?
16	Fleirvalsspørsmål	Kor ofte får du hjelp av nokon heima med engelsk lekse di?
17	Spørsmål til open undersøking	Kva er utdanningsnivået av foreldra dine?
18	Fleirvalsspørsmål	Kor mange engelske bøker har du og familien din heima (ca.)
19	Fleirvalsspørsmål	Korleis hadde du det i engelsk timane på barneskule?
20	Spørsmål til open undersøking	Korleis hadde du det i engelsk timane på barneskule, kommentar.
21	Matrisespørsmål	Her kjem nokre spørsmål om påstanden din til engelsk som skulefag på UNGDOMSKULE. Svara skal være om påstanden din i fortid ikkje nå.
22	Matrisespørsmål	Her kjem nokre spørsmål om påstanden din til engelsk som skulefag på VIDAREGÅANDE. Så kan du tenkje nå, dette skuleår.
23	Fleirvalsspørsmål	Som regel, kor lett er det å skjønne skuletekster (Targets, arbeidsark..) på engelsk?
24	Fleirvalsspørsmål	Som regel, kor lett er det å skjønne munnleg engelsk på skulen (lærar, videoar, film osv)
25	Fleirvalsspørsmål	Som regel, kor lett er det å bruke munnleg engelsk på skulen i engelsk timane?
26	Fleirvalsspørsmål	Som regel, kor lett er det å skrive oppgaver til Targets i engelsk?

27	Fleirvalsspørsmål	Som regel, kor lett er det å skrive e-post/Itsl melding til Alison på engelsk?
28	Fleirvalsspørsmål	Som regel, kor lett er det å skrive plakat/PowerPoint på engelsk?
29	Fleirvalsspørsmål	Som regel, kor lett er det å skrive 'an essay' på engelsk?
30	Matrisespørsmål	Kva brukar du engelsk til utanfor engelsktimane? Veldig mykje (>10 timar i veka) Mykje (5-10 timar i veka) Ganske mykje (1-5 timar i veka) Ganske lite (<1 time i veka) Ingenting
31	Spørsmål til open undersøking	Om du har skrive annet i det siste spørsmål, skriv kva annet er.
32	Spørsmål til open undersøking	Skriv ned din 5 favoritt/mest brukt engelsk bruk utanom engelsktimane. For eksempel Facebook, YouTube, Gaming, Instagram osv. Favoritt på toppen 1 2 3 4 5
33	Spørsmål til open undersøking	Engelsk bruk utanom engelsktimane – skriv i rekkjefølge kva av desse ferdigheitene du brukar mest (som gjennomsnitt i ein månad) lese, lytte, skrive, snakke Topp (det du gjer mest) 1 2 3 4 5
34	Matrisespørsmål	Her kjem nokre spørsmål om påstanden din til engelsk som språk i fritida di.
35	Matrisespørsmål	Utanom engelsktimane på skulen, kor ofte pratar, skrivar, lesar, høyrer du på engelsk (kan være lekse, Facebook osv. alt utanom timane)
36	Fleirvalsspørsmål	Samanlikne med andre ressursar, kor mykje har lesing engelske skuletekster (Targets, Access to English, ark kopierte frå lærarbøker, nettsider) på skulen og i fritida din bidra til engelskkunnskapen din?
37	Fleirvalsspørsmål	Samanlikne med andre ressursar, kor mykje har lesing engelske romaner/novelle på skulen og i fritida din bidra til engelskkunnskapen din?
38	Fleirvalsspørsmål	Samanlikne med andre ressursar, kor mykje har lesing engelskspråkleg film og TV på skulen og i fritida din bidra til engelskkunnskapen din?
39	Fleirvalsspørsmål	Samanlikne med andre ressursar, kor mykje har kommunikasjon med venner (kjente) på skulen og i fritida din bidra til engelskkunnskapen din?
40	Fleirvalsspørsmål	Samanlikne med andre ressursar, kor mykje har kommunikasjon med ukjente (t.d. gaming, videochat, Messenger), på skulen og i fritida din bidra til engelskkunnskapen din?
41	Fleirvalsspørsmål	Samanlikne med andre ressursar, kor mykje har YouTube på skulen og i fritida din bidra til engelskkunnskapen din?
42	Spørsmål til open undersøking	Er det noko annet du gjer i fritida din som bidra til engelsk kunnskapen din?
43	Ja/nei-spørsmål	Kommunisere du (munnleg og/eller skriftleg) regelmessig i engelsk med nokon?
44	Spørsmål til open undersøking	Om ja, skriv ned kva type kommunikasjon (munnleg eller skriftleg eller begge to)

45	Spørsmål til open undersøking	Om ja, skriv ned kven du kommunisere med i engelsk. Kan være fleire enn ein.
46	Fleirvalsspørsmål	Om ja, kor ofte?
47	Fleirvalsspørsmål	Dei tre årane på ungdomskule: kor trur du at du lærte det mest du kan i engelsk?
48	Fleirvalsspørsmål	Dette skuleåret på vidaregåande: kor trur du at du lærte det mest du kan i engelsk?
49	Fleirvalsspørsmål	Generelt: kor trur du at du lærte det mest du kan i engelsk?
50	Fleirvalsspørsmål	TAF elever har engelsktimer i vg1 og ikkje vg2-vg4. Kva synes du om dette?
51	Spørsmål til open undersøking	Tusen takk ☺. Om du har kommentarar angående engelsk på grunnskule/vgs/på jobb/fritida osv. så kan du skrive noko her.

Appendix F

Language Diary Template

The Language Diary Template was made on Google (gskole/iskule) and shared with each student individually. The diary was closed to everyone else.

Dear student, have a look through the diary below and see if you understand. Any questions, just ask me in the English lessons this week. It's all about your **English** use **outside of your English lessons**. This means that you can include any breaks (pause) in your school hours too. All of the information you provide is confidential.

[PS- please don't start filling it in yet \(du skal fylle inn 4. mars tom 15. mars\)](#)

Example

Aktivitet	Detaljer (tittel, siden, sted)	Lesing L , Skriftlig S , Muntlig M , Hører på H	Kor mykje– skriv cirka kor mange time og minutter. t.d. 0t 25m (25 minutter)
Youtube	LillySingh heima EvanFong skule + heima	H H	H (0t 20m) H (0t 15m)

Diary Day 1 (the students were given multiple days)

Aktivitet	Detaljer (tittel, siden) STED - skule, arbeidsplass, andre	Lesing L , Skriftlig S , Muntlig M , Hører på H	Kor mykje– skriv cirka kor mange time og minutter. t.d. 0t 25m (25 minutter)
Lest engelsk språklige bok/bøker. Novelle/roman (skriv om det er digitalt eller vanlig bok)			
Lydfil - Engelsk språklige bok/bøker. Novelle/romaner			
Podcast osv			
Lest nyheter (papir avis)			
Lest noko magasin/tegneserier (papir)			

Engelske språklige TV serier (N – norsk tekst, E – engelsk tekst, U – uten tekst)			
Engelske språklige film (N – norsk tekst, E – engelsk tekst, U – uten tekst)			
Facebook (inkl. lesing, messenger, chat osv)			
Youtube (inkl. videoer, forums, tekst)			
Gaming (PS, X-box, PC online osv - inkl. skriftlig/muntlig chatting, instruksjonar, stillinger osv)			
Twitter/snapchat/instagram/texting			
Musikk			
Surfing på nettet (nyheter, gossip, tegneserier, wikipedia osv)			
Pratar med nokon i engelsk (på skype, videochat, mobil ellers ansikt til ansikt)			
Annet			

Appendix G

Vocabulary tests

Test G1: Receptive. The updated Vocabulary Levels Test (Webb, Sasao, & Ballance, 2017)

This is test that looks at how well you know useful English words. Put a check under the word that goes with each meaning. Here is an example.

	game	island	mouth	movie	song	yard
land with water all around it						
part of your body used for eating and talking						
piece of music						

It should be answered in the following way.

	game	island	mouth	movie	song	yard
land with water all around it		<input type="checkbox"/>				
part of your body used for eating and talking			<input type="checkbox"/>			
piece of music					<input type="checkbox"/>	

1,000 Word Level

	choice	computer	garden	photograph	price	week
cost						
picture						
place where things grow outside						

	eye	father	night	van	voice	year
body part that sees						
parent who is a man						
part of the day with no sun						

	center	note	state	tomorrow	uncle	winter
brother of your mother or father						
middle						
short piece of writing						

	box	brother	horse	hour	house	plan
family member						
sixty minutes						
way of doing things						

	animal	bath	crime	grass	law	shoulder

green leaves that cover the ground						
place to wash						
top end of your arm						

	drink	educate	forget	laugh	prepare	suit
get ready						
make a happy sound						
not remember						

	check	fight	return	tell	work	write
do things to get money						
go back again						
make sure						

	bring	can	reply	stare	understand	wish
say or write an answer to somebody						
carry to another place						
look at for a long time						

	alone	bad	cold	green	loud	main
most important						
not good						
not hot						

	awful	definite	exciting	general	mad	sweet
certain						
usual						
very bad						

2,000

	coach	customer	feature	pie	vehicle	weed
important part of something						
person who trains members of sports teams						
unwanted plant						

	average	discipline	knowledge	pocket	trap	vegetable
food grown in gardens						
information which a person has						
middle number						

	circle	justice	knife	onion	partner	pension
round shape						
something used to cut food						
using laws fairly						

	cable	section	sheet	site	staff	tank
part						

place						
something to cover a bed						

	apartment	cap	envelope	lawyer	speed	union
cover for letters						
kind of hat						
place to live inside a tall building						

	argue	contribute	quit	seek	vote	wrap
cover tightly and completely						
give to						
look for						

	avoid	contain	murder	search	switch	trade
have something inside						
look for						
try not to do						

	bump	complicate	include	organize	receive	warn
get something						
hit gently						
have as part of something						

	available	constant	electrical	medical	proud	super
feeling good about what you have done						
great						
happening all the time						

	environmental	junior	pure	rotten	smooth	wise
bad						
not rough						
younger in position						

3,000

	angle	apology	behavior	bible	celebration	portion
actions						
happy occasion						
statement saying you are sorry						

	anxiety	athlete	counsel	foundation	phrase	wealth
combination of words						
guidance						
large amount of money						

	agriculture	conference	frequency	liquid	regime	volunteer
farming						
government						
person who helps without payment						

	asset	heritage	novel	poverty	prosecution	suburb
--	-------	----------	-------	---------	-------------	--------

having little money						
history						
useful thing						

	audience	crystal	intelligence	outcome	pit	welfare
ability to learn						
deep place						
people who watch and listen						

	consent	enforce	exhibit	retain	specify	target
agree						
say clearly						
show in public						

	accomplish	capture	debate	impose	proceed	prohibit
catch						
go on						
talk about what is correct						

	absorb	decline	exceed	link	nod	persist
continue to happen						
goes beyond the limit						
take in						

	approximate	frequent	graphic	pale	prior	vital
almost exact						
earlier						
happening often						

	consistent	enthusiastic	former	logical	marginal	mutual
not changing						
occurring earlier in time						
shared						

4,000

	cave	scenario	sergeant	stitch	vitamin	wax
healthy supplement						
opening in the ground or in the side of a hill						
situation						

	candle	diamond	gulf	salmon	soap	tutor
something used for cleaning						
teacher						
valuable stone						

	agony	kilogram	orchestra	scrap	slot	soccer
group of people who play music						
long, thin opening						
small unwanted piece						

	crust	incidence	ram	senator	venue	verdict
hard outside part						
judgment						
place						

	alley	embassy	hardware	nutrition	threshold	tobacco
government building						
plant that is smoked in cigarettes						
small street between buildings						

	fling	forbid	harvest	shrink	simulate	vibrate
do not allow						
make smaller						
throw						

	activate	disclose	hug	intimidate	plunge	weep
cry						
tell						
turn on						

	diminish	exaggerate	explode	penetrate	transplant	verify
break into pieces violently						
get smaller						
move something to another place						

	adjacent	crude	fond	sane	spherical	swift
beside						
not crazy						
quick						

	abnormal	bulky	credible	greasy	magnificent	optical
believable						
oily						
unusual						

5,000

	gown	maid	mustache	paradise	pastry	vinegar
hair on your upper lip						
perfect place						
small baked food						

	asthma	chord	jockey	monk	rectangle	vase
container for cut flowers						
group of musical notes that are played at the same time						
shape with two long and two short sides						

	batch	dentist	hum	lime	pork	scripture
green fruit						
low, constant sound						
meat from pigs						

	amnesty	claw	earthquake	perfume	sanctuary	wizard
liquid that is made to smell nice						
man who has magical powers						
safe place						

	altitude	diversion	hemisphere	pirate	robe	socket
height						
kind of clothing						
person who attacks ships						

	applaud	erase	jog	intrude	notify	wrestle
announce						
enter without permission						
remove						

	bribe	expire	immerse	meditate	persecute	shred
cut or tear into small pieces						
end						
think deeply						

	commemorate	growl	ignite	pierce	renovate	swap
catch fire						
exchange						
go into or through something						

	bald	eternal	imperative	lavish	moist	tranquil
calm and quiet						
having no hair						
slightly wet						

	diesel	incidental	mandatory	prudent	superficial	tame
not dangerous						
required						
using good judgment						

Name.....

Test G2: Productive Vocabulary after Nation (1983), Laufer and Nation (1999)

Complete the underlined words.

WRITE CLEARLY/skriv ryddig og tydelig

The 2000-word level

1. I'm glad we had this opp..... to talk.
2. There are a doz..... eggs in the basket.
3. Every working person must pay income t.....
4. The pirates buried the trea..... on a desert island.

5. Her beauty and cha..... had a powerful effect on men.
6. La..... of rain led to a shortage of water in the city.
7. He takes cr..... and sugar in his coffee.
8. The rich man died and left all his we..... to his son.
9. Pup..... must hand in their papers by the end of the week.
10. This sweater is too tight. It needs to be stret.....
11. Ann intro..... her boyfriend to her mother.
12. Teenagers often adm..... and worship pop singers.
13. If you blow up that balloon any more it will bur.....
14. In order to be accepted into the university, he had to impr..... his grades.
15. The telegram was deli..... two hours after it had been sent.
16. The differences were so sl..... that they went unnoticed.
17. The dress you're wearing is lov.....
18. He wasn't very popu..... when he was a teenager, but he has many friends now.

Name..... **WRITE CLEARLY/skriv ryddig og tydelig**

The 3000-world level

1. He has a successful car..... as a lawyer.
2. The thieves threw ac..... in his face and made him blind.
3. To improve the country's economy, the government decided on economic ref.....
4. She wore a beautiful green go..... to the ball.
5. The government tried to protect the country's industry by reducing the imp..... of cheap goods.
6. The children's games were funny at first, but finally got on the parents' ner.....
7. The lawyer gave some wise coun..... to his client.
8. Many people in England mow the la..... of their houses on Sunday morning.
9. The farmer sells the eggs that his he..... lays.
10. Sudden noises at night sca..... me a lot.
11. France was proc..... a republic in the 18th century.
12. Many people are inj..... in road accidents every year.
13. Suddenly he was thru..... into the dark room.

14. He perc..... a light at the end of the tunnel.
15. Children are not independent. They are att..... to their parents.
16. She showed off her sle..... figure in a long narrow dress.
17. She has been changing partners often because she cannot have a sta..... relationship with one person.
18. You must wear a bathing suit on a public beach. You're not allowed to be na..... .

Name..... **WRITE CLEARLY/skriv ryddig og tydelig**

The 5000-word level

1. Soldiers usually swear an oa..... of loyalty to their country.
2. The voter placed the ball..... in the box.
3. They keep their valuables in a vau..... at the bank.
4. A bird perched at the window led..... .
5. The kitten is playing with a ball of ya..... .
6. The thieves have forced an ent..... into the building.
7. The small hill was really a burial mou..... .
8. We decided to celebrate New Year's E..... together.
9. The soldier was asked to choose between infantry and cav..... .
10. This is a complex problem which is difficult to compr..... .
11. The angry crowd sho..... the prisoner as he was leaving the court.
12. Don't pay attention to this rude remark. Just ign..... it.
13. The management held a secret meeting. The issues discussed were not disc..... to the workers.
14. We could hear the sergeant bel..... commands to the troops.
15. The boss got angry with the secretary and it took a lot of tact to soo..... him.
16. We do not have adeq..... information to make a decision.
17. She is not a child, but a mat..... woman. She can make her own decisions.
18. The prisoner was put in soli..... confinement.

Name..... **WRITE CLEARLY/skriv ryddig og tydelig**

The University Word List level

1. There has been a recent tr..... among prosperous families towards a smaller number of children.
2. The ar..... of his office is 25 square meters.
3. Phil..... examines the meaning of life.
4. According to the communist doc..... , workers should rule the world.
5. Spending many years together deepened their inti..... .
6. He usually read the sport sec..... of the newspaper first.
7. Because of the doctors' strike the cli..... is closed today.
8. There are several misprints on each page of this te..... .
9. The suspect had both opportunity and mot..... to commit the murder.
10. They insp..... all products before sending them out to stores.
11. A considerable amount of evidence was accum..... during the investigation.
12. The victim's shirt was satu..... with blood.
13. He is irresponsible. You cannot re..... on him for help.
14. It's impossible to eva..... these results without knowing about the research methods that were used.
15. He finally att..... a position of power in the company.
16. The story tells us about a crime and subs..... punishment.
17. In a hom..... class all students are of a similar proficiency.
18. The urge to survive is inh..... in all creatures.

Name..... **WRITE CLEARLY/skriv ryddig og tydelig**

The 10000-word level

1. The baby is wet. Her dia..... needs changing.
2. The prisoner was released on par..... .
3. Second year University students in the US are called soph..... .
4. Her favorite flowers were or..... .
5. The insect causes damage to plants by its toxic sec..... .
6. The evac..... of the building saved many lives.

7. For many people, wealth is a prospect of unimaginable felicity.
8. She found herself in a predicament without any hope for a solution.
9. The deacon helped with the care of the poor of the parish.
10. The hurricane whirled along the coast.
11. Some coal was still smoldering among the ashes.
12. The dead bodies were mutilated beyond recognition.
13. She was sitting on a balcony and basked in the sun.
14. For years waves of invaders pillaged towns along the coast.
15. The rescue attempt could not proceed quickly. It was impeded by bad weather.
16. I wouldn't hire him. He is unmotivated and indolent.
17. Computers have made typewriters old-fashioned and obsolete.
18. Watch out for his wily tricks.

Name..... **WRITE CLEARLY/skriv ryddig og tydelig**

TASK B: Put in any word *or phrase* that 'strengthens' the word in bold print. You can use any word that you think is appropriate, including slang etc Adapted from Hasselgren (1994)

1. What..... **nonsense!**
2. This is**bliss!**
3. The party was a/an **success.**
4. Milk is **subsidised.**
6. His leg was **bleeding**
7. The roof was **leaking**
8. She **apologised**
5. 50 people were **wounded.**

TASK C: Find a verb – write down the verb that you think fits best..

1. It is important to your national identity.
2. He has a reputation as a playboy.
3. She phoned to her sympathy.
4. He has treatment for his ulcer.

Appendix H

Questions 8, 30 & 35 from the Questionnaire

Extramural English as calculated from the questionnaires. Given in hours per week.
Minimum and maximum scores are given where deemed appropriate

Table H1: Set A

Participants	Variable	n	M	SD	min	max
Male	EE (qu. 30)	14	39.95	25.69	7.00	102.94
Female		11	42.45	22.98	10.00	84.44
Male	EE (qu. 30)	14	32.92	22.66	6.50	88.08
Female	excluding music & homework	11	29.45	19.65	4.00	65.08
Male	Writing (qu	14	3.43	3.33		
Female	35)	11	3.95	3.0		
Male	Reading	14	5.50	2.91		
Female		11	5.41	3.0		
Male	Listening	14	7.5	0.00		
Female		11	6.68	1.82		
Male	Speaking	14	2.25	2.59		
Female		11	3.55	2.76		
Male	Sum of	14	18.68	7.55		
Female	LSRW	11	19.60	7.73		

Table H2: Set B

Participants	Variable	n	M	SD	min	max
Male	EE	5	34.20	17.63	10.50	59.5
Female		12	32.21	20.81	7.00	71.50
Male	EE	5	26.23	14.24	10.00	52.00
Female	excluding music & homework	12	24.13	18.03	4.00	64.00
Male	Writing	5	3.40	2.53		
Female		12	3.13	2.32		
Male	Reading	5	7.50	0.00		
Female		12	5.42	2.66		

Male	Listening	5	7.50	0.60
Female		12	6.75	1.75
Male	Speaking	5	2.30	3.13
Female		12	3.46	2.69
Male	Sum of	5	20.70	4.54
Female	LSRW	12	18.75	6.25

Table H3: Set A, Females + Males

Participants	Variable	n	M	SD	min	max
Male + Female	EE (qu. 30)	25	41.05	24.06	7	102.94

Table H4: Set B, Females + Males

Participants	Variable	n	M	SD	min	max
Male + Female	EE (qu. 30)	17	32.79	19.4	7	71.50

Table H5: Set AB

Participants	Variable	n	M	SD	min	max
Male + Female	EE (qu. 30)	42	37.71	22.42	7	102.94

Table H6: Data collected and analysed from Question 30 in the Questionnaire, hours per week

Row number	Student number	Gender	Total EE	Total EE excl. music	Total EE excl. music & homework
Set A					
1	1	2	42,36	30,50	27,50
2	2	1	29,36	17,50	17,50
3	3	2	10,00	7,00	4,00
4	4	2	28,36	16,50	13,50
5	5	2	66,36	54,50	54,00
6	6	1	35,50	35,50	35,50
7	7	2	31,50	24,00	21,00
8	8	1	58,86	51,36	48,36
9	9	1	78,86	78,36	70,86
10	10	1	29,00	28,50	25,50
11	11	2	34,86	23,00	22,50
12	12	2	35,50	28,00	27,50
13	13	2	84,44	72,58	65,08
14	14	2	37,86	26,00	18,50
15	15	1	33,50	33,50	33,50
16	16	1	34,72	22,86	19,86
17	17	1	17,36	17,36	16,86

18	18	2	21,50	18,50	15,50
19	19	1	15,00	12,00	11,50
20	20	1	48,86	37,00	29,50
21	21	1	39,36	31,86	31,86
22	22	2	74,22	62,36	54,86
23	23	1	29,00	28,50	25,50
24	24	1	102,94	91,08	88,08
25	25	1	7,00	7,00	6,50
Set B					
26	1	2	20,50	13,00	10,00
27	2	2	7,00	4,00	3,50
28	3	1	38,50	31,00	23,64
29	4	2	28,50	21,00	18,00
30	5	2	37,00	29,50	26,50
31	6	1	33,00	30,00	27,00
32	7	2	34,50	31,50	31,00
33	8	2	45,00	37,50	34,50
34	9	2	8,50	5,50	5,00
35	10	1	10,50	10,00	10,00
36	11	2	63,50	56,00	53,00
37	12	2	19,50	12,00	11,50
38	13	1	59,50	52,00	49,00
39	14	1	29,50	22,00	21,50
40	15	2	10,50	10,50	7,50
41	16	2	71,50	64,00	56,50
42	17	2	40,50	33,00	32,50

Note. Digits are expressed using the Norwegian system of a comma. For computation in English, replace the comma with a point. For example, 7,50 (Norwegian) = 7.50 (English).

Table H7: Data collected and analysed from Question 8 in the Questionnaire

Row number SPSS	Student number	Gender	English at work (code)
Set A			
1	1	2	1
2	2	1	1
3	3	2	1
4	4	2	3
5	5	2	2
6	6	1	5
7	7	2	3
8	8	1	3
9	9	1	3
10	10	1	4
11	11	2	2
12	12	2	2
13	13	2	3
14	14	2	2
15	15	1	2
16	16	1	3
17	17	1	0
18	18	2	1
19	19	1	2
20	20	1	1

21	21	1	3
22	22	2	3
23	23	1	2
24	24	1	2
25	25	1	2
Set B			
26	1	2	2
27	2	2	1
28	3	1	3
29	4	2	0
30	5	2	0
31	6	1	1
32	7	2	0
33	8	2	2
34	9	2	1
35	10	1	2
36	11	2	1
37	12	2	1
38	13	1	1
39	14	1	1
40	15	2	1
41	16	2	3
42	17	2	2

Note. 0 = nothing (ingenting); 1 = very little (veldig lite); 2 = little (ganske lite); 3 = quite a lot (ganske mykje); 4 = a lot (mykje); 5 = much (veldig mykje)

Appendix I

Language Diary Recordings

Table I1: Language Diaries, Activities, hours per week. Subsets Aa + Bb

Student	Novel/Short story reading	TV	Film	Music	FB	YouTube	Twitter/texting/Instagram	Surfing Internet	Gaming	Other
Aa 1	1.67	6.75	-	13.25	1.42	0.92	2.10	1.67	-	
Aa 2	-	3.00	-	1.00	0.10	6.20	0.17	-	-	
Aa 3	-	1.50	1.25	6.00		-	0.33	1.00		Audiobook (0.5)
Aa 4	-	4.42	-	17.10	3.50	3.83	3.00	1.50	-	Read the news (0.33)
Aa 5	-	13.70	-	17.75	4.75	1.93	4.50	2.75		Podcast (2.17)
Aa 6	-	13.67	-	14.00	-	0.25	-	-	5	-
Bb 1	0.67	-	2.50	5.67	-	2.25	-	0.83	-	Audiobook 1.50
Bb 2	-	0.75	-	5.60	0.03	1.00	0.02	-	-	-
Bb 3	1.08	1.33	2.25	36.20	1.58	5.40	-	1.58 (comic and newspaper)	-	Specific: Read the news (1.25) Comic (1.00)
Bb 4	-	3.83	-	8.70	-	-	-	-	-	-
Bb 5	2.83	1.50	6.60	3.00	0.17	4.13	1.25	2.75	-	Unspecified 0.33

Note: unspecified means that the information has been omitted because it could help identify a particular student.

Table I2: Language Diaries, EE Hours per week

Row number	Student number	Gender	Language Diaries
Set A			
1	1	2	27.78
2	2	1	10.47
3	3	2	10.58
4	4	2	33.68
5	5	2	47.55
6	6	1	32.92
7	7	2	
8	8	1	
9	9	1	
10	10	1	
11	11	2	

12	12	2	
13	13	2	
14	14	2	
15	15	1	
16	16	1	
17	17	1	
18	18	2	
19	19	1	
20	20	1	
21	21	1	
22	22	2	
23	23	1	
24	24	1	
25	25	1	
Set B			
26	1	2	13.42
27	2	2	7.40
28	3	1	50.09
29	4	2	12.53
30	5	2	22.56
31	6	1	
32	7	2	
33	8	2	
34	9	2	
35	10	1	
36	11	2	
37	12	2	
38	13	1	
39	14	1	
40	15	2	
41	16	2	
42	17	2	

Language Diaries: Additional information

As mentioned previously, only data recorded in the first seven days of the language diaries has been used in the general statistics presented in this thesis. However, a number of students recorded up to 12 days. Some of the findings in these ‘extra’ days are worth noting. For instance, between days 8 and 12, Student Bb3 recorded using 7 hours and 10 minutes looking up information in English on the Internet for their science assignment. Student Aa1 and Aa4 also reported similar activity. Another student reported watching ‘The Good Doctor’ TV programme on days 9 to 12, which although entertainment proved relevant for their vocational course.

Appendix J

Question 30 from the Questionnaire

Types of EE recorded, in question 30 of the Questionnaire, mean scores

Table J1: Set A³⁹

N = number of participants; *M* = arithmetic mean expressed in hours; *SD* = Standard Deviation.

Participants	Variable	<i>N</i>	<i>M</i>	<i>SD</i>
Male	Reading novel, short story	14	0.18	0.25
Female		11	0.23	0.26
Male	TV N subtitles	14	4.41	4.41
Female		11	4.58	3.52
Male	TV E subtitles	14	2.46	3.34
Female		11	2.59	2.75
Male	TV no subtitles	14	1.00	1.33
Female		11	2.48	3.85
Male	Film N subtitles	14	1.93	2.62
Female		11	4.12	3.88
Male	Film E subtitles	14	1.36	2.61
Female		11	1.32	1.35
Male	Film no subtitles	14	1.36	2.13
Female		11	1.14	1.35
Male	YouTube	14	6.35	4.71
Female		11	2.68	2.66
Male	Gaming offline	14	1.56	3.55
Female		11	0.54	1.21
Male	Gaming online	14	1.78	3.54
Female		11	1.00	2.33
Male	Music	14	4.78	5.30
Female		11	9.46	2.27
Male	Facebook	14	1.96	2.70
Female		11	1.27	2.38
Male	Messenger, e-mail	14	1.39	1.51
Female		11	2.99	3.67

Note. For TV & Film: N = Norwegian; E = English; No = No subtitles. Music refers to listening and reading song lyrics. For a discussion of the term ‘listening’ see *Results and Discussion* 4.2.4.

Male	News	14	1.97	2.59
Female		11	1.73	2.27
Male	Blog, Twitter, Discussion forums	14	5.0	4.14
Female		11	2.22	3.55
Male	Magazines + Comics	14	0.12	0.21
Female		11	0.14	0.23
Male	Homework	14	2.25	2.59
Female		11	9.45	3.62

Table J2: Set B⁴⁰

Participants	Variable	n	M	SD
Male	Reading novel, short story	5	0.40	0.22
Female		12	0.79	2.13
Male	TV N subtitles	5	2.50	1.12
Female		12	3.96	3.31
Male	TV E subtitles	5	2.30	3.13
Female		12	2.41	2.69
Male	TV no subtitles	5	2.20	3.21
Female		12	1.79	2.78
Male	Film N subtitles	5	2.50	1.12
Female		12	2.83	2.53
Male	Film E subtitles	5	1.30	1.57
Female		12	1.87	2.17
Male	Film no subtitles	5	2.30	3.13
Female		12	1.79	2.78
Male	YouTube	5	4.80	2.47
Female		12	2.92	3.06
Male	Gaming offline	5	0.80	1.25
Female		12	0.25	0.87
Male	Gaming online	5	3.10	4.02
Female		12	0.25	0.87
Male	Music	5	6.07	4.42
Female		12	5.75	2.70
Male	Facebook	5	0.60	1.34
Female		12	1.38	2.88

Note. For TV & Film: N = Norwegian; E = English; No = No subtitles. Music refers to listening and reading song lyrics. For a discussion of the term ‘listening’ see *Results and Discussion* 4.2.4.

Male	Messenger, e-mail	5	2.4	1.46
Female		12	4.4	4.69
Male	News	5	2.40	3.05
Female		12	1.63	2.85
Male	Blog, Twitter, Discussion forums	5	4.7	3.09
Female		12	1.88	2.85
Male	Magazines + Comics	5	0.70	1.30
Female		12	0.63	1.13
Male	Homework	5	1.90	1.51
Female		12	2.33	2.05

Table J3: Set AB ⁴¹

Participants	Variable	n	M	SD
Male	Reading novel, short story	19	0.24	0.26
Female		23	0.52	1.54
Male	TV N subtitles	19	3.91	3.88
Female		23	4.25	3.35
Male	TV E subtitles	19	2.42	3.21
Female		23	2.50	2.65
Male	TV no subtitles	19	1.32	1.97
Female		23	2.12	3.27
Male	Film N subtitles	19	2.08	2.30
Female		23	3.45	3.24
Male	Film E subtitles	19	1.34	2.34
Female		23	1.61	1.80
Male	Film no subtitles	19	1.61	2.37
Female		23	1.48	2.52
Male	YouTube	19	5.94	4.23
Female		23	2.80	2.81
Male	Gaming offline	19	1.36	3.10
Female		23	0.39	1.03
Male	Gaming online	19	2.12	3.61
Female		23	0.61	1.73

Note. For TV & Film: N = Norwegian; E = English; no = No subtitles. Music refers to listening and reading song lyrics. For a discussion of the term ‘listening’ see *Results and Discussion* 4.2.4.

Male	Music	19	5.12	4.42
Female		23	7.52	3.63
Male	Facebook	19	1.61	2.46
Female		23	1.32	2.59
Male	Messenger, e-mail	19	1.66	1.53
Female		23	3.71	4.20
Male	News	19	2.08	2.64
Female		23	1.67	2.18
Male	Blog, Twitter, Discussion forums	19	4.92	3.81
Female		23	2.04	3.14
Male	Magazines + Comics	19	0.26	0.69
Female		23	0.39	0.85
Male	Podcast	19	0.87	1.32
Female		23	1.02	2.21
Male	Snapchat	19	2.70	3.47
Female		23	3.34	3.78

Note. n = number of participants; M = Mean (hours per week); SD = Standard Deviation. For TV & Film: N = Norwegian; E = English; no = No subtitles. Music refers to listening and reading song lyrics.

Appendix K

In-school Achievements

Table K1: Data collected from various English assignments and proficiency test

Row number	Student number	Gender	Proficiency test scores (/150)	Spring tentamen (%)	In-depth project (%)
Set A					
1	1	2	121,00	65,68	62,56
2	2	1	131,00	84,40	87,52
3	3	2	110,00	84,40	81,28
4	4	2	135,00	75,04	68,80
5	5	2	129,00	84,40	93,76
6	6	1	132,00	56,32	62,56
7	7	2	127,00	75,04	78,18
8	8	1	124,00	53,20	71,92
9	9	1	119,00	68,80	68,80
10	10	1	131,00	81,28	81,28
11	11	2	106,00	87,52	93,76
12	12	2	79,00	68,80	62,56
13	13	2	107,00	65,68	81,28
14	14	2	105,00	75,04	65,68
15	15	1	82,00	50,08	62,56
16	16	1	118,00	65,68	78,18
17	17	1	-	48,84	56,32
18	18	2	135,00	90,00	84,40
19	19	1	90,00	62,56	68,80
20	20	1	81,00	50,08	56,32
21	21	1	132,00	68,80	65,68
22	22	2	110,00	78,18	81,28
23	23	1	115,00	62,56	65,68
24	24	1	131,00	90,00	87,52
25	25	1	122,00	78,18	78,18
Set B					
26	1	2	140,00	62,56	87,52
27	2	2	119,00	53,20	46,96
28	3	1	104,00	65,68	71,92
29	4	2	120,00	59,44	81,28

30	5	2	139,00	93,76	100,00
31	6	1	93,00	81,28	59,44
32	7	2	133,00	84,40	84,40
33	8	2	89,00	65,68	81,28
34	9	2	115,00	78,16	68,80
35	10	1	112,00	53,20	50,08
36	11	2	128,00	75,04	87,52
37	12	2	136,00	81,28	84,40
38	13	1	109,00	68,80	68,80
39	14	1	119,00	50,08	50,08
40	15	2	126,00	84,40	87,52
41	16	2	105,00	68,80	68,80
42	17	2	114,00	68,80	68,80

Note. Digits are expressed using the Norwegian system of a comma. For computation in English, replace the comma with a decimal point. For example, 7,50 (Norwegian) = 7.50 (English).

Appendix L

Data collected from Question 35, Questionnaire and analysed

Table L1: LSRW Scores

Row number	Student number	Gender	Receptive	Productive	+ Receptive Productive
Set A					
1	1	2	15,00	3,50	18,50
2	2	1	15,00	15,00	30,00
3	3	2	6,00	6,00	12,00
4	4	2	15,00	15,00	30,00
5	5	2	15,00	8,00	23,00
6	6	1	15,00	0,00	15,00
7	7	2	8,00	1,00	9,00
8	8	1	15,00	8,00	23,00
9	9	1	15,00	10,50	25,50
10	10	1	15,00	10,50	25,50
11	11	2	15,00	3,50	18,50
12	12	2	3,50	3,50	7,00
13	13	2	15,00	6,00	21,00
14	14	2	15,00	15,00	30,00
15	15	1	15,00	6,00	21,00
16	16	1	7,50	0,50	8,00
17	17	1	8,00	1,00	9,00
18	18	2	15,00	10,50	25,50
19	19	1	10,50	0,00	10,50
20	20	1	10,50	6,00	16,50
21	21	1	15,00	0,50	15,50
22	22	2	10,50	10,50	21,00
23	23	1	15,00	6,00	21,00
24	24	1	15,00	15,00	30,00
25	25	1	10,50	0,50	11,00
Set B					
26	1	2	15,00	10,50	25,50
27	2	2	10,50	6,00	16,50
28	3	1	15,00	3,50	18,50
29	4	2	15,00	3,00	18,00
30	5	2	15,00	3,50	18,50
31	6	1	15,00	10,50	25,50
32	7	2	15,00	10,50	25,50
33	8	2	6,00	1,00	7,00
34	9	2	6,00	6,00	12,00
35	10	1	15,00	0,50	15,50
36	11	2	15,00	3,50	18,50
37	12	2	15,00	10,50	25,50
38	13	1	15,00	3,50	18,50
39	14	1	15,00	10,50	25,50
40	15	2	8,00	3,50	11,50
41	16	2	15,00	10,50	25,50
42	17	2	10,50	10,50	21,00

Note. Digits are expressed using the Norwegian system of a comma. For computation in English, replace the comma with a decimal point. For example, 7,50 (Norwegian) = 7.50 (English).

Appendix M

Students' responses to questions 23-29, questionnaire translated from Norwegian to English (my translations)

- It feels unnatural and therefore I'm afraid of making mistakes. Didn't get enough practise in oral English at lower secondary school.

(Det er ikke naturlig nok, og da er en redd for å si feil. Fått for lite øving med engelsk muntlig på ungdomskule).

- I am not very good at speaking English and aren't speak out loud. I'm afraid of making mistakes etc

(Eg snakker ikkje bra engelsk, og tørr derfor ikkje snakke høgt. Redd for å sei feil osv)

- Nobody else talks English and it's boring when you're the only one

(Ingen andre gjer det, difor er det kjedelig å snakke engelsk åleine).

- Language – pronunciation – afraid – I'm bad – I can't speak English - stress

(Språk – Uttale - Redd – Er dårleg – Kan ikkje engelsk – Angst).

- I don't like talking English because I think my pronunciation isn't good enough. I hate doing things if I think I'm no good at them, but I do try, but I don't like it.

(Eg likar ikkje å snakke engelsk, fordi eg synast at eg ikkje er god nok med uttale. Hater å gjere ting eg ikkje føle der eg presterer bra, men prøver a vere litt aktiv men det vanskelig for eg likar det ikkje)

- Listening is easy, but I get stuck when I have to formulate what I'm thinking, maybe because I'm nervous because I'm not as good in English as I am in Norwegian and I'm afraid of making mistakes.

(Det er lett å høyre på andre men eg vert litt stuck når eg skal formulere det eg meiner, kanskje pga nervøsiteten for at eg ikkje er like sjølvssikker i engelsk som i norsk og eg er redd for å sei noko feil)

- It's not my mother-tongue so I'm a little shy and afraid that I'll make mistakes. I'm not confident enough about my pronunciation and language in English.

(Det er ikkje mitt morsmål, så eg blir sjenert og redd for å ikkje snakka rett. Eg er ikkje sjølvssikker på uttalen og språket mitt i engelsk).

Appendix N

Vocabulary Test Scores

Table N1: Vocabulary Test Scores, out of 30

Row number	Student number	Gender	Receptive Vocabulary 2000 raw data /30	Receptive Vocabulary 4000 raw data /30	Productive vocabulary 2000 raw data /18 ^a	Productive vocabulary 2000 /30 ^b	Productive vocabulary university level /18 ^a	Productive vocabulary university level /30 ^b	Average Score
Set A									
1	1	2	30,00	22,00	12,00	20,10	2,00	3,30	24,00
2	2	1	30,00	29,00	16,00	26,70	10,00	16,80	28,60
3	3	2	29,00	24,00	12,00	20,10	5,00	8,40	24,40
4	4	2	-	-	16,50	27,60	9,00	15,00	-
5	5	2	30,00	28,00	14,00	23,40	4,00	6,60	27,10
6	6	1	29,00	27,00	13,50	22,50	2,50	4,20	26,30
7	7	2	30,00	24,00	11,00	18,30	3,00	5,10	24,10
8	8	1	30,00	27,00	12,00	20,10	2,00	3,30	25,70
9	9	1	27,00	24,90	16,00	26,70	3,00	5,10	26,20
10	10	1	30,00	26,00	14,00	23,40	7,00	11,70	26,50
11	11	2	29,00	26,00	11,00	18,30	5,00	10,80	24,50
12	12	2	27,00	27,00	3,00	5,10	0,00	0,00	19,70
13	13	2	27,00	18,00	8,00	13,20	1,00	1,80	19,40
14	14	2	29,00	28,00	13,00	21,60	5,00	8,40	26,20
15	15	1	26,10	18,00	8,00	13,20	0,00	0,00	19,10
16	16	1	30,00	27,00	15,00	24,90	7,00	11,70	27,30
17	17	1	30,00	24,00	11,00	18,30	2,00	3,30	24,10
18	18	2	28,00	21,00	16,00	26,70	4,00	6,60	25,20
19	19	1	29,00	24,00	7,00	11,70	2,50	4,20	21,60
20	20	1	23,00	-	5,00	8,40	0,00	0,00	-
21	21	1	27,00	21,00	8,00	13,20	4,00	6,60	20,40
22	22	2	29,00	25,00	8,50	14,10	4,00	6,60	22,60
23	23	1	28,00	23,10	10,00	16,80	4,00	6,60	22,60
24	24	1	30,00	29,00	16,00	26,70	10,00	16,80	28,50
25	25	1	30,00	25,00	13,00	21,60	8,00	13,20	25,50

Set B									
26	1	2	30,00	26,00	16,00	26,70	9,00	15,00	27,50
27	2	2	28,00	16,00	7,00	11,70	5,00	8,40	18,50
28	3	1	30,00	23,00	10,00	16,80	4,00	6,60	23,30
29	4	2	28,00	24,00	12,00	20,10	3,00	5,10	24,00
30	5	2	30,00	29,00	18,00	30,00	10,00	17,40	29,70
31	6	1	27,00	23,00	4,00	6,60	4,00	6,60	18,80
32	7	2	30,00	24,00	15,00	24,90	5,00	10,80	26,30
33	8	2	28,00	20,00	5,00	8,40	3,00	5,10	18,70
34	9	2	27,00	19,00	10,00	16,80	4,00	6,60	20,90
35	10	1	29,00	19,00	17,00	28,20	4,00	6,60	25,40
36	11	2	29,00	27,00	17,50	29,10	6,00	9,90	28,40
37	12	2	30,00	24,00	17,00	28,20	4,00	6,60	27,40
38	13	1	25,00	17,00	10,00	16,80	1,00	1,80	19,60
39	14	1	30,00	23,00	10,00	16,80	4,00	6,60	23,30
40	15	2	28,00	20,00	13,00	21,60	3,00	5,10	23,20
41	16	2	24,00	20,00	8,00	13,20	4,00	6,60	19,10
42	17	2	28,00	20,00	12,00	20,10	1,00	1,80	22,60

Note. Average Score refers to the average of 2000-word receptive + 4000-word receptive + 2000-word productive. Digits are expressed using the Norwegian system of a comma. For computation in English, replace the comma with a decimal point. For example, 7,50 (Norwegian) = 7.50 (English).

a = The original scores/raw data of the productive tests, scores out of 18.

b = The original scores of the productive tests converted into a common measurement scale out of 30, to allow comparison with the receptive scores.

Table N2: Expressed as Percentages and with Gender Differentiation

Vocabulary test	<i>n</i>	<i>M</i> %	<i>SD</i>
2000 word receptive	41	94.98	5.85
4000 word receptive	40	78.42	11.76
2000 word productive	41	64.97	24.02
University level productive	42	21.85	15.24

	Male Set AB	Male Set AB	Female Set AB	Female Set AB
Vocabulary type	M	SD	M	SD
Vocabulary receptive 2000	94.84	6.88	95.09	4.96
Vocabulary productive 2000	63.05	21.42	66.57	25.25

Appendix O

Correlation

Quantitative Variable	Quantitative Variable	Set AB
Average of 2000 word vocab tests	Proficiency test	$r=0.810$ very strong correlation is significant at the 0.01 level (2-tailed) $\rho = 0.767$
Average of 2000 receptive word	LSRW qu. 35	$r = 0.338$ weak correlation significant at the 0.05 level (2-tailed) $\rho = 0.342$ weak correlation significant at the 0.05 level (2-tailed)
Proficiency	LSRW qu. 35	$\rho = 0.331$ weak correlation is significant at the 0.05 level (2-tailed) $r = 0.362$
Average score of productive 2000-word vocabulary tests	Sum of LSRW (qu. 35)	$r = 0.387$ weak correlation significant at the 0.05 level (sig. 2 tailed = 0.011)
Average score in vocabulary tests ^a	YouTube (hours per week)	$r = 0.344$ weak correlation is significant at the 0.05 level (sig. 2-tailed = 0.030)
EE	LSRW (qu. 35)	$r = 0.366$ weak correlation is significant at the 0.05 level (sig 2 tailed = ,017)

Note. LSRW = Sum of amount of time spent speaking, listening, writing and listening. ρ = Spearman's Rank; r = Pearson's Coefficient.

^a n = average of 2000-word receptive + 4000-word receptive + 2000-word productive test scores out of 30

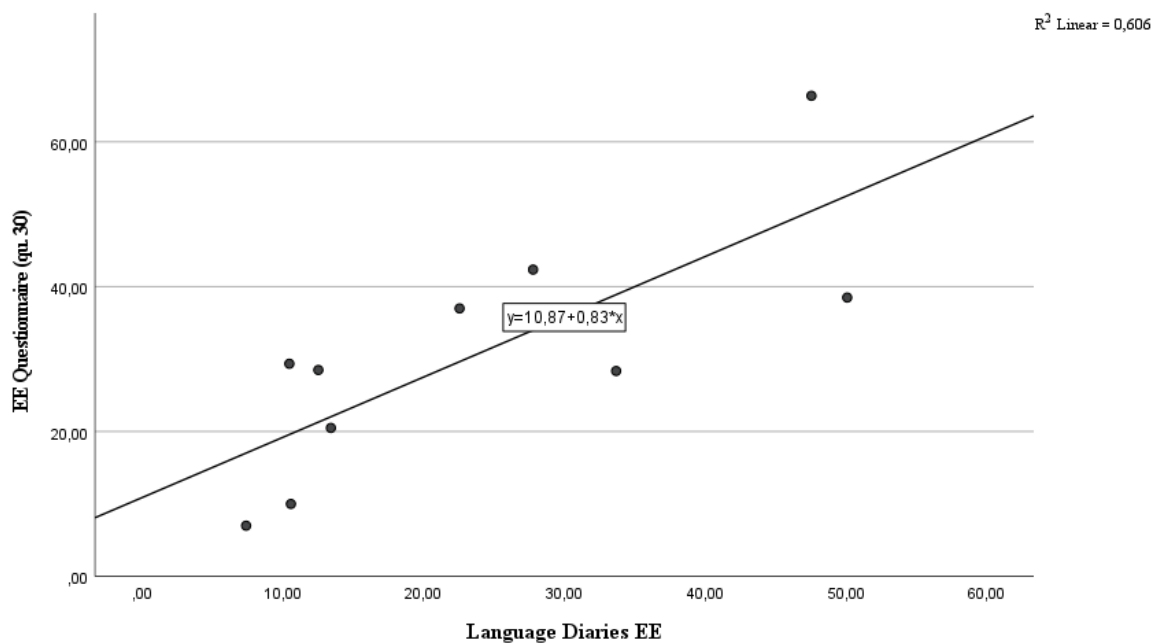
Appendix P

Cronbach, Correlation and T-tests

Reliability Tests

EE recorded in the questionnaire (qu. 30) and in the language diaries

EE, hours per week Questionnaire	Language diaries, hours per week	rho=0.700 (correlation is significant at the 0.05 level (sig 2-tailed = ,016)
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A reliability analysis was carried out on the perceived task values scale comprising 18 items. The 18 variables in question 30 of the questionnaire were considered internally consistent enough to run a Cronbach's alpha test. Since the score was higher than 0.70 it suggests a high internal consistency and acceptable reliability.

Reliability Statistics

Cronbach's Alpha	Chronbach's Alpha based on standardized items	Number of items
0.779	0.793	18

Note. Number of items refers to the variables (types of EE). See Table 4.4 and Appendix J.

Appendix Q

Students' Views translated from Norwegian to English, my translation.

Taken from questions 22 & 50 in the questionnaire, expressed as percentages.

Question	Strongly agree (highly relevant)	Agree	Disagree	Strongly disagree
In-school English is relevant for my future employment	9.50	52.40	21.40	16.70
In-school English is relevant for my spare time	46.30	39.00	14.70	0
In-school English is important for my future higher education.	34.00	56.00	100	0
There are too few English lessons at school.	11.90	40.50	38.10	9.50
^a TAF students should have more than one year in English at upper secondary school.	28.20	46.2000	15.40	10.20

Note. The questions are translated from Norwegian (my translation).

^a Question 50 has been reworded from the original question in the questionnaire, in order to facilitate the scale in this table.

