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Comparison of Extramural English Activities and Their Relations to Vocabulary Breadth at Lower Austrian Secondary Schools

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Abstract

This thesis investigates the correlation between extramural English (EE) activities and the receptive vocabulary breadth of Lower Austrian students at a vocational college for social management (HLS) and a vocational school for social occupation (FSB). A quantitative approach was employed to explore this relationship. Data on extramural English activities, linguistic background, and socioeconomic status were collected through a questionnaire, while the V_YesNo vocabulary test assessed the participants' receptive vocabulary knowledge. Results indicate a positive correlation between engagement in extramural English activities and receptive vocabulary breadth, with productive extramural English activities showing a stronger correlation than receptive ones. No significant differences were observed in extramural English engagement between HLS and FSB students. These findings suggest that participation in extramural English activities enhances vocabulary acquisition, particularly through productive extramural English practices.

Diese Arbeit untersucht die Korrelation zwischen extramuralen Englisch-Aktivitäten (EE) und der rezeptiven Wortschatzbreite von Schülerinnen und Schülern aus Niederösterreich an einer Höheren Lehranstalt für Sozialmanagement (HLS) und einer Fachschule für soziale Berufe (FSB). Ein quantitativer Ansatz wurde verwendet, um diese Beziehung zu erforschen. Daten zu extramuralen Englisch-Aktivitäten, sprachlichem Hintergrund und sozioökonomischem Status wurden durch einen Fragebogen gesammelt, während der V_YesNo-Wortschatztest das rezeptive Wortschatzwissen der Teilnehmenden erfasste. Die Ergebnisse zeigen eine positive Korrelation zwischen der Teilnahme an extramuralen Englisch-Aktivitäten und der rezeptiven Wortschatzbreite, wobei produktive extramurale Englisch-Aktivitäten eine stärkere Korrelation als rezeptive aufweisen. Es wurden keine signifikanten Unterschiede in der Teilnahme an extramuralen Englisch-Aktivitäten zwischen HLS- und FSB-Schülern festgestellt. Diese Ergebnisse deuten darauf hin, dass die Teilnahme an extramuralen Englisch-Aktivitäten den Wortschatzerwerb fördert, insbesondere durch produktive extramurale Englisch-Praktiken.

Table of Contents

List of Tables

List of Figures

List of Abbreviations

AHS	Allgemeine Höhere Schule; Grammar school (for lower and upper secondary education)
BNC	British National Corpus
CALL	Computer Assisted Language Learning
COCA	Corpus of Contemporary American English
EE	Extramural English
EFL	English as a Foreign Language
ELL	English Language Learning
ELT	English Language Teaching
ER	Extensive Reading
ESL	English as a Second Language
FSB	Fachschule für soziale Berufe; Vocational School for Social Occupations (upper secondary education)
HAS	Handelsschule; Vocational Business School (upper secondary education)
HISCED	Highest International Standard Classification of Occupation
HISCO	Highest International Standard Classification of Education
HISEI	Highest International Socio-Economic Index
HLS	Höhere Lehranstalt für Sozialmanagement; Vocational College for Social Management (upper secondary education)
IDLE	Informal Digital Learning of English
L1	First Language
L2	Second Language
OILE	Online Informal Learning of English
PVTS	Picture Vocabulary Size Test
S	Social Status
SES	Socioeconomic Status
SLA	Second Language Acquisition
VLT	Vocabulary Levels Test
VST	Vocabulary Size Test

1 Introduction

My profession as an English teacher reinforced my belief that English language learning (ELL) extends well beyond the classroom. I observed that many students actively engage with English in their everyday lives: they immerse themselves in English-language social media content, watch movies and television series in English, and, in some cases, read books in English. These students appeared to perform better in formal English assessments, prompting me to investigate how language acquisition occurs outside of the traditional school setting. This observation was the catalyst for my research, which aims to delve into the informal out-of-school English learning experiences of Lower Austrian students.

In today's increasingly interconnected world, the significance of English is highlighted by its omnipresence across multiple media and platforms. English dominates much of the content available to young people, from popular songs on the radio (Grau 2009: 162) to multiplayer online games that connect users globally, with English as the main lingua franca (Thorne 2008; Kuppens 2010). Approximately 60% of all internet content is in English (Statista 2023), providing an unprecedented opportunity for students to interact with the language across a variety of subjects and interests. This easy access to English allows young people from different backgrounds to participate in a wide range of English-language activities outside of school. As a result, the traditional classroom is now one of many places where students can learn English. For this reason, it can be assumed that schools are no longer the singular source for learning English, with digital media serving as a substantial complementary resource (de Bot, Evers & Huibregtse 2007: 68).

Studies by Berns, de Bot & Hasebrink (2007), Sundqvist (2009), and Krüger (2023) highlight that students frequently engage informally with English outside of school, leading to what is referred to as extramural English (EE), a term coined by Sundqvist (2009). This terminology, which will be used throughout this thesis, encompasses informal engagement with English in out-of-school contexts. Such activities are usually motivated by enjoyment rather than a direct goal of language learning, suggesting that much of the language acquisition occurring in these contexts is incidental (Sundqvist & Wikström 2015: 66). This incidental learning represents a potential source of ELL, making it essential for educators to understand the types and impacts of EE activities on students' language development. Such understanding can enrich educators'

perspectives on learners' proficiencies and aid students in recognizing the value of their informal learning experiences.

The phenomenon of EE and its effects on language proficiency and vocabulary knowledge has been explored across various European contexts. Previous studies consistently indicated that engagement with EE correlates positively with language proficiency and vocabulary size (Berns, de Bot & Hasebrink 2007; Sundqvist 2009; Hahn 2017; Schwarz 2020; Krüger 2023). This thesis builds upon this research following a similar approach and aims to further contribute to the understanding of EE in the European context, with a specific focus on Austria. The primary objective of this study is to investigate the relationship between EE engagement and receptive vocabulary knowledge. Schwarz (2020) and Hahn (2017) studied Austrian students in Viennese grammar schools (AHS) and vocational business schools (HAS). This research adds more insight into the Austrian context by focusing on students from a Lower Austrian vocational college for social management (HLS) and a vocational school for social occupations (FSB). Data was collected using a questionnaire to assess EE engagement and a vocabulary test to measure receptive vocabulary knowledge. To consider other factors that might affect vocabulary learning, the questionnaire included questions on socioeconomic background as well. While some studies have incorporated a broader range of variables, including gender, attitude toward English, or vocabulary learning strategies (Berns, de Bot & Hasebrink 2007; Sundqvist 2009; Hahn 2017; Schwarz 2020; Krüger 2023), this study narrows its focus due to time constraints.

This thesis is structured in three main parts—literature review, research methods, and findings interpretation—beginning with an overview of EE, the role of English in Europe and Austria, and key second language acquisition (SLA) theories on vocabulary acquisition, including methods for measuring vocabulary size. The literature review also examines existing research on how EE engagement fosters vocabulary growth. The methodology section details the research design, participants, and data collection tools (a questionnaire and a vocabulary test), as well as the data preparation and analysis steps. The results shed light on the relationship between students' EE activities and their vocabulary knowledge, and the concluding discussion compares these findings with related studies, addresses implications for English language teaching (ELT) and learning (ELL), acknowledges limitations, and proposes areas for further investigation.

2 Terminology

In order to facilitate understanding of vocabulary acquisition through extramural language activities, common terms that appear throughout the thesis are explained. Crucial terms that require clarification and that form dichotomies are learning and acquisition, explicit and implicit learning, and formal and informal learning. Researchers use these terms in their theories and concepts to describe how language learning processes function; therefore, their comprehension is of utmost importance.

First, some researchers distinguish between second language learning (SLL) and acquisition (SLA). If so, the former relates to conscious learning and the latter to unconscious learning (Mitchell, Myles & Marsden 2019: 2). Krashen (1981: 1-3), who established this difference, defines unconscious acquisition as the learners not realizing they are undergoing the process and conscious learning as the learner being aware of the learning process. Many researchers adopted his distinction and built upon it. However, evaluating consciousness is difficult, and therefore, this vague concept is criticized, and it led to not everybody in the research field distinguishing between these two terms (Mitchell, Myles & Marsden 2019: 53). Regarding this thesis, the terms acquisition and learning will be used interchangeably.

Turning to the terminological distinction of implicit versus explicit learning. The former can be compared to unconscious acquisition, being below the level of awareness (Reber 1967). Ender (2016) and Hulstijn (2005) explain that implicit means not only unconscious but also unintentional. Explicit learning, on the other hand, is defined as “language material [that] is processed with the conscious intention to discover form” (Ender 2016: 538).

Ender computes the dichotomy of intentional/incidental (unintentional) into the equation to explain these concepts more thoroughly. Implicit acquisition can only be incidental, but explicit learning could happen in both ways, intentionally or incidentally (see Figure 1). Learners can detect form and process it consciously/explicitly, but maybe “without the intention to retain the findings in the long term” (Ender 2016: 538).

Figure 1 depicts the intersection between these concepts.

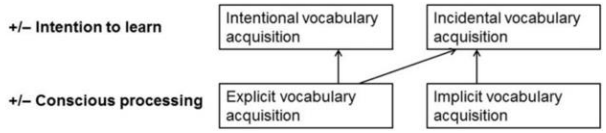

Figure 1 "Intersection between Incidental/Intentional Learning and Implicit/Explicit Processes" (Ender 2016: 538)

An example given by Hahn (2017: 9) helps explain these two terms: If a learner watches a TV series in the target language for entertainment and encounters a word that he/she does not know, two possible situations could occur. Either the learner makes use of a dictionary, or he/she derives the meaning from context. The first situation describes an explicit learning process because the learner consciously decides to discover the meaning of the word. The second situation depicts implicit learning, occurring unconsciously and without any intention (Hahn 2017: 9). If the learner decides to watch the TV series in the first place with the intention of learning, it would only be explicit learning.

Finally, the dichotomy of informal and formal captures different learning scenarios. Informal learning takes place without the help of a teacher or an educational system. On the contrary, formal learning includes a teacher or a school system (e.g. can be a private or public school program, language or tutoring classes) scheduling language learning activities that lead to language acquisition (Zainuddin & Yunus 2022: 2). Therefore, if the language learning process, with its decisions of when and what to learn, lies within the hands of the learner, it is classified as informal. When the learning activities and processes are scheduled and organized by a teacher or tutor, they are considered formal. Referring to the previously mentioned example, if watching a specific television series is assigned as a school task or by an instructor, it constitutes formal learning. Conversely, if a learner independently decides to watch the series—regardless of any explicit intention to learn—it is classified as informal learning.

Language learning apps such as Babbel, Duolingo, or Rosetta Stone are categorized as hybrids that identify themselves as *non-formal* or *non formal*. These programs include a syllabus, structure, and instructions but also the freedom of choice for the learner to decide about his/her own pace and progress (Dressman & Sadler 2020: 4).

In conclusion, conscious and explicit learning, as well as unconscious and implicit learning, mainly share the same meaning. The former may occur intentionally or incidentally, the latter only without intention. Both can happen as formal learning, connected to school or some sort of educational system, or as informal learning, meaning out-of-class and autonomously.

3 Extramural English

Language acquisition extends beyond the classroom, with students engaging in various out-of-school activities that significantly contribute to their language development—particularly vocabulary growth. This chapter focuses on EE, outlining its characteristics and importance, then compares it with related concepts to emphasize its uniqueness within language learning. It further explores the prominence of English in Europe and Austria, highlighting the influence of daily exposure on EE activities, and concludes by examining the Internet's role in facilitating and enhancing extramural language learning.

3.1 Definition

Sundqvist (2009) created this term because no other definition established by researchers before her perfectly described what she observed during her PhD study. The word 'extramural' originates from Latin, where the first part – extra – carries the meaning 'outside' and the second part – mural – means 'wall'. Altogether, EE is defined as English that is happening outside the walls. These walls stand for the classroom or other educational institutions. Therefore, EE describes ELL that occurs outside the educational context where learners engage with the English language voluntarily, in their own free time, unintentionally or also deliberately (Sundqivst & Sylvén 2016: 6). The following quote offers a detailed description of how Sundqvist (2009: 25) defined EE:

> 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. For instance, a sudden encounter with a foreigner in the street, which leads to a conversation in English between the learner and the foreigner, is an example of an extramural English activity that the learner did not even know about before it actually happened.

What kind of EE activities learners engage in can vary because the opportunities seem endless. The multitude of such involvements has undoubtedly increased with the rise of the internet. It enables learners to access reading material, videos, podcasts, music, and more in their target language and, of course, interact with other learners or even native speakers. The lack

of internet availability means fewer EE opportunities. However, the traditional options are still accessible, such as buying or renting books, magazines, newspapers, or movies, producing language by writing a story, or engaging in real-life interactions with friends, families, or even a native speaker. Below, a list of common EE activities is presented to enhance understanding (Sandqvist & Sylvén 2016: 7):

- watching films,
- watching TV series,
- watching music videos,
- watching video blogs (vlogs),
- listening to music,
- reading blogs,
- reading magazines,
- reading newspaper,
- surfing English websites on the Internet,
- following people, news, organizations, and so on, on Twitter or Instagram (or some other online community),
- reading/writing/speaking/listening/interacting in real life or online, and
- playing video/digital games (online or offline, on one's own or with others).

Sundqvist and Sylvén (2016: 7) argue that EE activities involve in- and output or even interaction, which are important for SLA.

3.2 Related Concepts

Other researchers have established similar concepts which, however, differ from the term extramural English in some aspects. First, there is *incidental language learning* which Schmidt (1994) as well as Laufer and Hulstijn (2001) introduced, describing the unintentional acquisition of language. An example, given by Schmidt (1994: 16), is immigrants "whose primary motivation is to communicate (not to master the grammar) succeed[ing] in internalizing many of the rules and structures of the target language." Furthermore, Hulstijn (1992) demonstrated this incidental language learning when researching whether incidental L2 vocabulary acquisition occurs while reading. Comparing it with the concept of EE, Sundqvist and Sylvén (2016: 8) classify incidental language learning as part of it, to be exact, "as a sub-category of EE." The reason for this is that EE includes learning that happens with an intention to do so but also without.

A second concept sharing common ground with EE is *implicit language learning,* describing the process of unintentional as well as unconscious language acquisition (Ellis 2009: 7; cf.

chapter 2). Implicit and incidental language learning are likewise part of EE, therefore both being sub-categories (Sundqvist & Sylvén 2016: 9).

The term *out-of-class learning,* applied by Benson (2001: 139), shares the most similar meaning with EE (Sundqvist and Sylvén 2016: 8). As the meaning of the term suggests, there is no connection to school or other educational institutions. The learning process happens outside of it, and the learners alone decide if they engage in instructive activities, which can happen for amusement or out of interest. Problematic for Sundqvist and Sylvén (2016: 8), however, is the occurrence of the words *learning* and *class* in the term. *Learning* could be connected with the concept of Krashen (1981) where it would only happen consciously as well as explicitly. Moreover, *class* connotes school as well as educational settings and contexts, which is counterproductive since the term implies the exact opposite. For these reasons, Sundqvist and Sylvén (2016) suggest using the term *extramural English* and not *out-of-school learning,* even if they share close meanings.

As mentioned before, EE includes online as well as offline/non-internet-related activities. Therefore, the following theoretical approaches are again sub-categories of EE since they focus on SLA facilitated by the Internet.

First, Sockett (2014) established the term online informal learning of English, or OILE. With it, he defines online activities conducted by a learner without any connection to school, intentionally or unintentionally, consciously or unconsciously, and lastly, with the result of acquiring the English language.

The second relevant concept is *CALL in the digital wilds,* described by Sauro and Zourou (2019). To understand it, first, CALL must be explained. It stands for *computer-assisted language learning* and is the "study of applications of the computer in language teaching and learning" (Levy 1997: 1). CALL is divided into three categories, namely: in-class, extracurricular, and extramural CALL. *CALL in the digital wilds* (Sauro & Zourou 2019) refers to the latter idea; thus, language learning with the help of technology is not connected to any educational or formal context. Computers, phones, tablets, etc. allow the learners to be part of the digital space and its community, and through this, language learning occurs. In detail, Sauro and Zourou (2019: 2-3) define *CALL in the digital wilds* as follows:

- […] [L]earning takes place out-of-class within a digital context or community that is not governed or developed by a formally recognized school, university, or education provider;

- […] learning does not take place within a digital context or community with a primary goal of language teaching and learning;
- […] the impetus to learn in the out-of-class, digital context or community originates in the learner and not from curriculum guidelines, educational policy, or teacher direction; and
- […] learning is not directly mediated by curriculum educational policy, teacher practice, or norms of evaluation.

Lee (2022: 30) argues, however, that language learning through teaching does take place online. She represents the concept of IDLE – *Informal digital learning of English* – where research in this field supports her statement. For example, she mentions Bridge TV, a YouTube channel teaching English through videos with around 199,000 subscribers (as of July 28, 2023). Otherwise, these two concepts are rather similar. IDLE is categorized into extracurricular and extramural, with only the latter being relevant to this thesis. The language learning process is unstructured, out-of-class, naturalistic (no formal L2 teaching), and self-directed, meaning the learner is in charge (Lee 2022: 14). Concerning educational online content such as TED talks or YouTube videos, IDLE includes them as opposed to CALL in the digital wilds.

The term extramural English combines these above-mentioned concepts and can be seen as an umbrella term. In the following, the significance of the Internet is discussed, as it reflects how adolescents allocate their time today and influences their engagement in EE activities.

3.3 The Role of English in the European Union and Austria

With 24 official languages, the European Union is home to a wide diversity of languages (European Union n.d.). Such a variety necessitates a lingua franca, a language applied by speakers of different first languages to enable communication (Berns 2007a: 5). Within the context of the European Union, English occupies this pivotal role (House 2008: 64, Berns 2007a: 5).

The English language did not always bear this preeminent position; historically, it started to gain significance in the 17th and 18th centuries due to the growth of Britain's economic and political power. In the 20th century, the influence of this language spread further. The reason for this was the United States claiming world power after ending the First World War. After the second, the presence and influence of English continued to strengthen even further (Berns et. al 2007: 17). Subsequently, English was implemented in secondary education in Europe, and by the 1950s, it had been introduced into primary education as well. However, access to English lessons was initially contingent upon academic performance (Berns et. al 2007: 18). In

Austria, English education was exclusive to students at grammar schools (*Gymnasium* – from age 10 to 18), colleges for higher vocational education (*Höhere Berufsbildende Schulen* – from age 14 to 19) and advanced groups (*A-Zug)* of lower secondary schools (*Hauptschule* – from age 10 to 14) (Lechner 2002: 116-117). This exclusivity changed in 1985 when foreign language instruction became compulsory for all students in lower secondary schools (Lechner 2002: 119). Educational reforms continued, and by 1998, a foreign language became mandatory in primary schools (Dalton-Puffer, Faistauer & Vetter 2011: 183).

Although teaching English as a first foreign language is not mandatory in Austria—other languages may also be chosen—most schools at the primary and secondary levels opt to teach it. Consequently, English has emerged as the dominant first foreign language in Austria, with the vast majority of students learning it (Dalton-Puffer, Faistauer & Vetter 2011: 183).

The prevalence of English extends beyond Austria to the entirety of the European Union, where it remains the most frequently learned language among EU students. In 2020, slightly over 95% of pupils in general secondary education and almost 80% in secondary vocational education were studying English (Eurostat 2022). The Eurobarometer survey of 2012 indicated that even while most Europeans, namely 68%, acquired their language skills through lessons in school, alternative forms of learning were also reported, as depicted in figure 2.

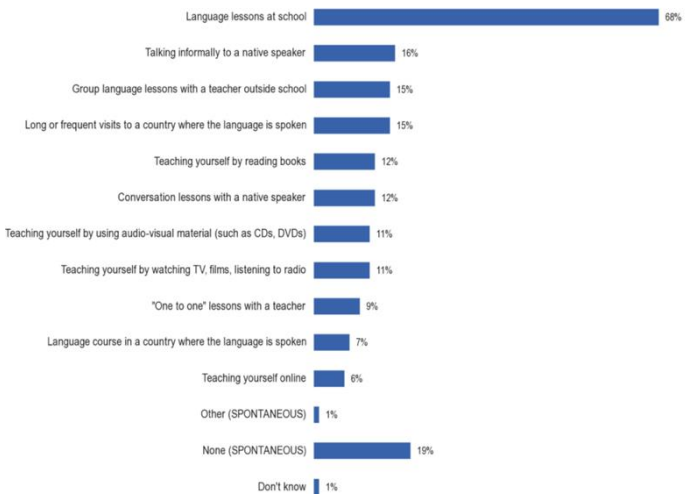

Figure 2 Methods of Language Learning in the EU (Europa 2012: 15)

This list illustrates that language learning is not confined to the school setting but that there are other methods existing such as conversing with natives, taking private lessons, traveling to the target country, watching movies/TV or listening to the radio as well as using the internet (Europa 2012: 15). A number of learners even consume and encounter more English in their

spare time compared to the input gained in school (Hasebrink, Berns & de Bot 2007: 115). Thus, in the EU, English is acquired both within and outside the school context, the latter can be categorized as EE activities.

In terms of language usage within the EU, the Eurobarometer revealed that 38% of EU citizens spoke English as a foreign language. This figure significantly surpassed those who spoke French (12%) or German (11%) (Europa 2012: 11). Moreover, nearly half of the interviewees who spoke English as a foreign language reported that they use it "on a more than occasional basis", with almost 20% using it daily (Europa 2012: 12). Most Europeans, namely 50%, applied their foreign language skills when being on holiday. Other contexts for using their foreign language competence were watching movies/TV and listening to the radio (37%), being online (36%), or when communicating with acquaintances (35%). Notably, there has been a marked increase – by 10 percentage points from 2005 to 2012 – in the number of European citizens using their foreign language skills to surf the web (Europa 2012: 13). Considering the significant upsurge in Internet use over the last decades, it is reasonable to assume that the frequency of using foreign languages skills online has even further increased until today. The implications of the Internet's role in language learning and usage are examined in detail in the subsequent chapter.

3.4 The Role of the Internet

In recent decades, the Internet has radically transformed life, work, and communication across Europe, including Austria. In the early 1990s, Internet usage was limited to a few, but this changed substantially in the following years. By the advent of the new millennium, it had become an integral component of everyday life. Merely 1% of the Austrian population surfed the web in 1994; a decade later, the figure jumped to 54%. Since the invention of the World Wide Web, the numbers have continued to surge, with 93% of Austrian residents using the Internet by 2021 (World Bank Group Data n.d.).

Regarding media usage in Austria, individuals aged 14 years and over spend an average of 255 minutes per day online (Der Standard 2022). A closer look at the ages of 14 to 29 shows an even more intense web usage, with an average of 420 minutes – seven hours – a day. Social media use within this younger demographic (14 to 29) is particularly excessive, with platforms like Instagram, TikTok, and Twitter/X capturing their attention for about 161 minutes, approximately 2.7 hours, each day (Der Standard 2022). Among teenagers aged 11 to 17, the

most favorite social networks include WhatsApp (96%), YouTube (94%), Instagram (75%), Snapchat (69%), and TikTok (68%) (Saferinternet.at 2023). This data illustrates the Internet's essential role in the everyday lives of the Austrian youth.

Globally speaking, an examination of the most widely used languages online positions English as the predominant language. As of January 2023, nearly 59% of web content is in English, with Russian as a distant second at just 5.3% (Statista 2023). These numbers underscore the dominance of English on the Internet and the high probability of non-native speakers engaging with English content online.

The data presented affirms that the Internet has had, continues to have, and will likely maintain a tremendous impact on society. Over recent decades, it has become indispensable for everyday activities, particularly impacting the younger generation, who allocate roughly seven hours of their day to it. Social media plays a crucial role in their daily communication and entertainment. Moreover, with over half of the Internet's content being in English, the language's status as the primary medium online is unambiguous. This widespread presence of English on the Internet means that adolescents are highly likely to encounter the language as they browse online.

Before discussing various extramural English activities and their impact on receptive vocabulary knowledge, where the pivotal role of the Internet is reflected, an insight into the process of second language acquisition is given.

4 Vocabulary Acquisition

This chapter's objective is to enhance understanding of the language learning process. First, the chapter introduces various perspectives on SLA and vocabulary learning. Subsequently, it explains the storage and processing mechanisms of vocabulary knowledge and factors influencing vocabulary acquisition. Finally, diverse methodologies for evaluating receptive vocabulary are examined.

4.1 Theories and Concepts of SLA and Vocabulary Acquisition

Krashen (1981, 1982, 1985), a well-known researcher in the field of SLA, developed ideas at the end of the 1970s and further expanded them over the years. In his *Acquisition-Learning Hypothesis*, a key component of his theory of second language acquisition, he distinguishes between acquisition and learning, as they capture two separate processes for him. Acquisition is described as the "subconscious process identical in all important ways to process children utilize in acquiring their first language" (Krashen 1985: 1), meaning acquiring language is an innate process possible through meaningful communication. It is similar to children learning their first language (Mitchell, Myles & Marsden 2019: 52-53). Learning, on the other hand, refers to the "conscious process that results in 'knowing about' a language" (Krashen 1985: 1); for instance, when learners pay attention to form, the rules, and the system of the language (Mitchell, Myles & Marsden 2019: 52-53). Meaningful communication that provokes unconscious acquisition can also happen in an educational setting, as learning – focusing on form and being conscious about the language structure and its rules – can occur in authentic/naturalistic settings, for instance, where more mature learners want to actively understand and ask people in their surroundings for grammatical information. Krashen's hypothesis has been criticized by other researchers due to vagueness and difficulty in distinguishing acquisition and learning; still, his separation of the two concepts has been prominent and inspiring for others (Mitchel, Myles & Marsden 2019: 52-53).

Another component of Krashen's (1982) overall theory is the *Input Hypothesis*. It refers to the unconscious acquisition of second language (L2) skills through "receiving and processing 'comprehensible input'". Comprehensible input is defined as language input that slightly exceeds the learner's L2 proficiency. According to Krashen, valuable input is sufficient to improve language skills, and L2 production is not necessary. This hypothesis has been criticized

since the definition of comprehensible input is not specific enough, as well as the explanation of the input's processing (Mitchell, Myles & Marsden 2019: 55).

The *Noticing Hypothesis*, established by Schmidt (1990, 1994, 2001), shares similarities with Krashen's *Input Hypothesis* since both acknowledge the importance of input. They both emphasize the role of exposure to language input in facilitating language development. However, they differ in their awareness of the input because Schmidt defines consciously *noticing* the form of the input as a crucial part of enabling language development. Krashen, on the other hand, states that the improvement of language occurs unconsciously. Schmidt speaks of noticing if a learner devotes attention to a specific word or structure when interacting with the target language, which can happen voluntarily or involuntarily. It would, for instance, count "when one notices the odd spelling for a new vocabulary word" (Schmidt 1994: 17). Analyzing and documenting his own Portuguese learning process, Schmidt (1994) collected evidence for his hypothesis.

Other researchers countered with alternative ideas, such as Michael Long's *Interaction Hypothesis* (1981, 1983a, 1983b). Long agreed with Krashen that acquisition is an unconscious process. However, it is not just generated via input but through interaction. Discourse "such as informal conversations or game-playing [is] rich in meaning negotiations, including repetitions, confirmations check or clarification request," and by participating in it, SLA happens (Mitchell, Myles & Marsden 2019: 58-59). This hypothesis found support in controlled studies (Gass & Varonis 1994; Pica, Young & Doughty 1987), where participants who had to orally complete problem-solving tasks were more successful when negotiating meaning.

After having presented the *Input* and *Interaction Hypothesis*, it is important to mention the *Output Hypothesis* of Merrill Swain (1985). Swain emphasizes production in the L2 because it entails the learner dealing with the grammatical structure of the target language by applying it via production (Mitchell, Myles & Marsden 2019: 59).

A combination of the output, input, and noticing concepts are the *Depth of Processing Hypothesis* by Schmitt (1995) and the *Involvement Load Hypothesis* by Hulstijn and Laufer (2001). These two ideas are rather similar and can be described together. The researchers argue that only input, output, or just noticing is not enough but that involvement in the task is necessary to achieve a better learning result. Therefore, the more a learner is involved in an

activity or task in the target language, the better the chances of acquiring language (Hulstijn & Laufer 2001: 20). Hulstijn and Laufer (2001: 16) presented three factors for involvement load in a task: need, search and evaluation. With regards to a reading task with comprehension questions given by a teacher, there is a need to give attention to words if the text includes glossed vocabulary and the words are necessary for the questions. If the unknown words are not referred to in the task and the learner must look them up, the first two factors, need and search, are included in the activity. Lastly, task fulfillers are in need of evaluation if the unknown vocabulary offers several meanings, and the correct one has to be selected.

Studies supporting this theory are Pabribakht and Wesche (1996), who discovered that extensive reading plus exercises yielded higher vocabulary acquisition than reading without extra tasks. Moreover, Ranalli (2008) focused on the computer game *The SIMs*™ and showed as well that more involvement leads to higher vocabulary retention. In contrast, a recent study by Ansarin and Khabbazi (2021) only partially confirmed the *Involvement Load Hypothesis*. The participants had to complete a sentence writing task (involvement load 3), a cloze deletion (involvement load 2), and a paragraph writing task (involvement load 0). Participants carrying out the first activity achieved the highest score on the vocabulary test, but there was no significant difference in the test results of the subjects completing the other tasks. Still, the study shows that high involvement covering the 3 factors need, search, and evaluation benefits vocabulary acquisition.

Together, these hypotheses are influential and contribute significantly to our understanding of how language and, therefore also, vocabulary are acquired. Krashen suggests that exposure to language input slightly beyond the learner's current proficiency level would lead to unconscious vocabulary acquisition. According to Schmidt's Noticing Hypothesis, acquisition occurs through conscious attention to language forms, meaning learners must actively notice new vocabulary to internalize it. Furthermore, Long's Interaction Hypothesis highlights that interaction involving negotiating meaning would increase vocabulary development. In addition, Swain's Output Hypothesis asserts that actively producing the language is crucial; in the context of vocabulary, this means using new words to facilitate their acquisition. Lastly, deeper cognitive engagement, as proposed by the Depth of Processing Hypothesis and the Involvement Load Hypothesis, suggests that the more learners are involved in a task, the easier it is to learn and retain new words. These concepts should be considered together, and a combination of them likely leads to effective vocabulary learning.

4.2 Vocabulary Knowledge

Learning a language is undoubtedly not possible without the human capacity to memorize vast amounts of information. Unlike computer memory, however, the human brain stores information through complex, interrelated neural networks rather than a binary format. Despite the complexity of this storage system, Paul Reber (2010), a professor of psychology, formulated a theory of the human brain having a memory capacity of around 2.5 petabytes, equivalent to 2.5 million gigabytes. To put this into perspective, it would be similar to a television operating continuously for over 300 years, archiving every show, movie, or series aired until reaching full storage capacity. While this is a rough estimation due to the intricacies of measuring human memory capacity, it illustrates the remarkable capability of human memory. This memory system and its workings are crucial to comprehend the complexity of acquiring vocabulary, for this reason, how language knowledge is stored is presented in the next section.

4.2.1 Declarative and Procedural Knowledge

The distinction between declarative and procedural word knowledge is pivotal in understanding the cognitive processes underlying vocabulary acquisition. The two concepts describe how language is stored as well as accessed by learners and they differ in terms of explicit versus implicit understanding (cf. chapter 2). Declarative knowledge is consciously accessed and demands cognitive effort (Qing 2009: 31). It encompasses factual knowledge and our understanding of the world. On the other hand, procedural knowledge is accessed unconsciously, immediately, and effortlessly (Qing 2009: 32). It applies to skills, and the execution of different activities (Qing 2009: 31).

Regarding vocabulary acquisition, the process of knowing a word in L2 begins as declarative knowledge and ends with the word being stored as procedural knowledge. However, it is important to note that not every L2 learner *proceduralizes* every word completely. The extent to which a word is internalized as procedural knowledge depends on the depth of word knowledge (cf. chapter 4.3.2.), encompassing aspects such as meaning, usage, collocations, or connotations (Qing 2009: 31-32). Hence, if learners accomplish fluency in their L2 and apply the language without effort and thinking, they manage to transition their language and vocabulary knowledge of the L2 in their procedural memory (Qing 2009: 33). This achievement, however, necessitates constant practice or early exposure to the language.

Moreover, it is contingent upon the "individual's intrinsic procedural learning abilities" (Ullman 2006: 100). Those capable of accessing and using their procedural knowledge are thus more likely to attain language proficiency comparable to C2 speakers.

4.2.2 Dimensions of Vocabulary Knowledge: Breadth vs. Depth and Receptive vs. Productive

These two concepts refer to the number of words known, and the extent of knowledge possessed about each word, thereby differing in their emphasis on range versus depth of understanding. Qing (2009: 34) explains these terms with the help of a representation of the mental vocabulary storage (see figure 3).

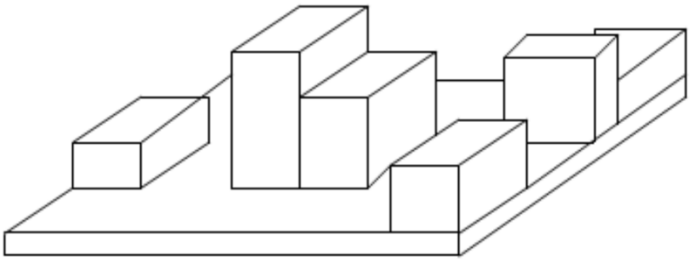

Figure 3 "A Simplified Mental Representation of Breadth and Depth of Vocabulary Knowledge" (Qing 2009: 34)

The bottom surface and its size represent the breadth of learners' vocabulary knowledge. Hence, a larger vocabulary knowledge – knowing the meaning of many different words in the target language – would be illustrated with a broad bottom board. It can be described as the mental lexicon of learners that helps them recognize words and their general meaning. However, they may not understand all their in-depth lexical features, like collocations that they are used in or if they have several meanings (Qing 2009: 35).

The blocks on top, on the other hand, visualize the depth of vocabulary knowledge, meaning how well a learner knows their vocabulary with regards to "phonemic (pronunciation), graphemic (spelling), morphemic, syntactic, semantic, collocational and phraseological (register, frequency) properties" (Qing 2009: 36-37), in other words, the vocabulary's lexical features. Richards (2015: 299-302) elaborates on the dimensions of knowing a word in more detail. Depth of vocabulary knowledge includes the awareness of

- word relations (synonyms and antonyms),
- the hierarchical order of words and their categorization,
- shared roots of words,

- multiple meanings,
- register,
- collocations,
- multi-word expressions ("[I]tems made up of two or more words […] whose meaning can often not be understood from knowing the meanings of the individual words in the expression" (Richards 2015: 300)),
- grammatical properties,
- and the cross-linguistic differences (words that are similar to one in the learner's native language but have a completely different meaning).

The more is known about these features of words, the more depth in word knowledge exists. Depth, therefore, describes the shades of knowledge a learner has of a lexical item.

Within the depth of vocabulary knowledge exists the distinction between receptive and productive vocabulary knowledge. In general, receptive vocabulary use entails recognizing the form of a word while listening or reading and recalling its meaning. On the other hand, productive vocabulary use involves the desire to convey meaning through speaking or writing, which requires retrieving and producing the correct spoken or written form of the word (Nation 2022: 52).

As mentioned above, depth means how well you know a word and its features. These features can be categorized into receptive and productive knowledge. Nation (2022: 54) provides an insightful categorization of the receptive and productive parts involved in knowing a word (see table 1).

Table 1 Knowing a Word (Nation 2022: 54)

Form	spoken	R	What does the word sound like?
		P	How is the word pronounced?
	written	R	What does the word look like?
		P	How is the word written and spelled?
	word parts	R	What parts are recognizable in this word?
		P	What word parts are needed to express the meaning?
Meaning	form and meaning	R	What meaning does this word form signal?
		P	What word form can be used to express this meaning?
	concept and referents	R	What is included in the concept?
		P	What items can the concept refer to?
	associations	R	What other words does this make us think of?
		P	What other words could we use instead of this one?
Use	grammatical functions	R	In what patters does the word occur?
		P	In what pattern must we use this word?
	collocations	R	What words or types of words occur with this one?
		P	What words or types of words must we use with this one?
	constraints on use (register, frequency)	R	Where, when and how often would we expect to meet this word?
		P	Where, when, and how often can we use this word?

In column 3, R = receptive knowledge, P = productive knowledge

To enhance understanding of these two terms, an example of the word *underdeveloped* is presented in the following. The receptive knowledge of the word *underdeveloped* involves (Nation 2022: 54-55):

- being able to recogni[z]e the word form when it is heard
- being familiar with its written form so that it is recogni[z]ed when it is met in reading
- recogni[z]ing that it is made up of the parts *under-, -develop-,* and *-ed* and being able to relate these parts to its meaning
- knowing that *undeveloped* signals a particular meaning
- knowing what the word means in the particular context in which it has just occurred
- knowing the concept behind the word, which will allow understanding in a variety of contexts

- knowing that there are related words like *overdeveloped, backward,* and *challenged*
- being able to recognize that *underdeveloped* has been used correctly in the sentence in which it occurs
- being able to recognize that words such as *territories* and *areas* are typical collocations
- knowing that *underdeveloped* is not an uncommon word and is not a pejorative word

Regarding productive knowledge, knowing *underdeveloped* involves (Nation 2022: 55):

- being able to say it with correct pronunciation, including stress
- being able to write it with correct spelling
- being able to construct it using the right word parts in their appropriate forms
- being able to produce the word to express the meaning 'underdeveloped'
- being able to produce the word in different contexts to express the range of meaning of *underdeveloped*
- being able to produce synonyms and opposites for *underdeveloped*
- being able to use the word correctly in an original sentence
- being able to produce words that commonly occur with it
- being able to decide to use or not use the word to suit the degree of formality of the situation (At present *developing* is more acceptable than *underdeveloped* which carries a slightly negative meaning.)

Nation's table of knowing a word (see table 1) and his example of the word *underdeveloped* illustrate the various facets of receptive and productive knowledge and use and can be understood as part of depth of vocabulary knowledge. Using a word productively in spoken and written form indicates a deeper understanding of this lexical item than if it is only recognized receptively. Therefore, receptive knowledge normally develops first and exceeds productive word knowledge (Nation 2022: 88). Possible explanations for receptive word knowledge being easier to acquire than productive word knowledge could be the following (Ellis & Beaton 1993: 548-549, cited in Nation 2022: 55-57)

1. <u>Amount of Knowledge:</u> For receptive use, learners only need to recognize a few key features of a word's form, while productive use requires more precise knowledge. This is evident in young children who may understand, for example, the word *spaghetti* but can only roughly pronounce it, producing forms like *stigli* or *parsghetti*. The form of words tends to influence difficulty more than their meaning because there is a more common understanding of meaning between two different languages than there is of form. Words in different languages might not match exactly in meaning, but their similarities usually outweigh their differences. For this reason, knowing the word form affects difficulty more than knowing its meaning. Moreover, precise knowledge of word

form is essential for productive use, making it more challenging than receptive learning. This explanation also applies to collocations, which require extensive language exposure and are crucial for production but not for receptive use.

2. Practice: This explanation suggests that receptive use typically is trained more than productive use in normal language-learning situations. This difference in practice may help explain why receptive vocabulary is generally larger than productive vocabulary.
3. Access: At the beginning of learning a new word in the target language, there is typically only a single straightforward connection to its L1 translation – the receptive direction. For example, the foreign word *kaki* would simply translate to *leg* in L1. In contrast, the L1 word has numerous competing associations – the productive direction – making productive recall more challenging due to multiple pathways to select from, with the existing associations in the L1 system being stronger (see table 2).

Table 2 Receptive and Productive Direction

L1 word		**Foreign word**
leg	→	*kaki*
	→	Collocations of *leg*
	→	Synonyms of *leg*
	→	Opposites of *leg*
	→	…

These explanations of why receptive production is easier than productive use likely complement each other instead of standing alone and competing (Ellis & Beaton 1993: 548-549).

4.3 Factors Influencing Vocabulary Learning

Having explored how memory stores and accesses vocabulary, it is essential to address the factors that influence the acquisition of words. While language input, output, or involvement (cf. chapter 4.1) contribute to learning, this section focuses on the characteristics of words that either facilitate or impede memorization.

The most prominent and influential characteristic of a word is its frequency of occurrence in the language. Frequency refers to how often a word appears in both spoken and written forms. For example, a common word such as *table* appears more frequently than a more specialized term like *idiosyncratic*. As a result, learners are likely to encounter the word *table* earlier and more often throughout the language learning process. Consequently, the frequency of a word significantly influences the likelihood of its acquisition (Milton 2009: 26).

Table 3 lists the 20 most frequent words in the British National Corpus (BNC) and compares them to another 20 words from the 5,000-word frequency band to illustrate the disparity. It demonstrates that the most frequent words are typically function words, which, while not rich in meaning, are essential for grammar and communication. Less frequent words, often content words like nouns, main verbs, and adjectives, carry more meaning. Both types are crucial for language mastery. Frequent words tend to interconnect more, as seen with the verb *get*, which forms various phrases and collocations. Less frequent words, like *gravel* and *cylinder*, have more limited use and collocations.

Table 3 "The Most Frequent Words, and Words from the 5,000-Word Band, and Their Occurrences in the BNC" (Kilgariff 2006, Milton 2009: 24)

Order	*Occurrences*	*Word*	*Order*	*Occurrences*	*Word*
1	6,187,267	the	5001	1188	regulatory
2	4,239,632	be	5002	1188	cylinder
3	3,093,444	of	5003	1187	curiosity
4	2,687,863	and	5004	1185	resident
5	2,186,369	a	5005	1185	narrative
6	1,924,315	in	5006	1185	cognitive
7	1,620,850	to	5007	1184	lengthy
8	1,375,636	have	5008	1184	gothic
9	1,090,186	it	5009	1184	dip
10	1,039,323	to	5010	1184	adverse
11	887,877	for	5011	1184	accountability
12	884,599	I	5012	1183	hydrogen
13	760,399	that	5013	1183	gravel
14	695,498	you	5014	1182	willingness
15	681,255	he	5015	1182	inhibit
16	680,739	on	5016	1182	attain
17	675,027	with	5017	1181	specialise
18	559,596	do	5018	1180	steer
19	534,162	at	5019	1180	selected
20	517,171	by	5020	1180	like

The table also highlights the significant frequency differences among words. The most frequent words in the BNC occur millions of times, whereas those in the 5,000-word band appear about 1,200 times in the BNC. Milton aimed to demonstrate the extent of the difference (see figure 4). Using Baudot's (1992) corpus of modern French, which consists of approximately 1.1 million words, Milton "calculated the average number of times that words in the first five 1-000-word frequency bands occur" (Milton 2009: 23)

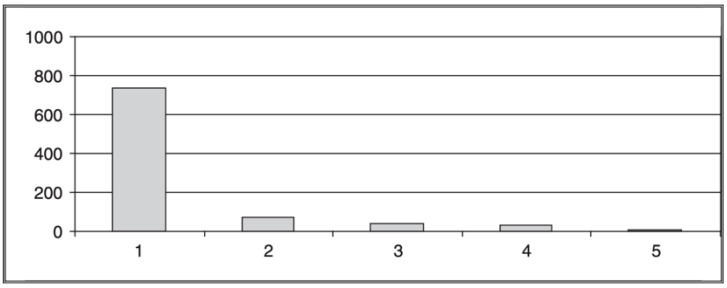

Figure 4 "Mean Frequency of Words in Frequency Bands" (Baudot 1992, cited in Milton 2009: 25)

Figure 4 shows “that words in the first 1,000-word band are roughly 11 times more frequent, on average than words in the second band, and 40 times more frequent than words in the fifth frequency band” (Milton 2009: 23). On average, in the corpus, words in the first band appear about 800 times, while words in the second band appear 74 times, and those in the fifth band only 20 times (Milton 20069: 23-24). This vast difference in word frequency means that learners quickly become familiar with the most frequent words. In contrast, most words in the corpus appear only once or twice. This frequency distribution helps explain why some words are learned more quickly than others.

A vocabulary profile of a typical learner, created by Meara (1992: 4), demonstrates that an average learner is more familiar with high-frequency words compared to less frequent ones. This is clearly illustrated in figure 5, where the first column on the left represents knowledge of the first 1,000 most frequent words, therefore being the highest, the second column of the subsequent 2,000 most frequent words, being already lower, and so on. Thus, from left to right, the columns decrease because learners typically know fewer of the lower-frequency words. The less common a word is, the lower the probability that learners will know it (Milton 2009: 25). Milton (2006), who conducted a study involving language learners in Greece, supported this model. With the help of the X-Lex (Meara & Milton 2003), the vocabulary knowledge of the Greek learners was tested. Milton was able to mirror the results of Meara’s vocabulary profile of a learner, showing a high left side declining to the right. This substantiates the idea that the more frequent a word is the easier it is for the learner to acquire (Milton 2009: 26).

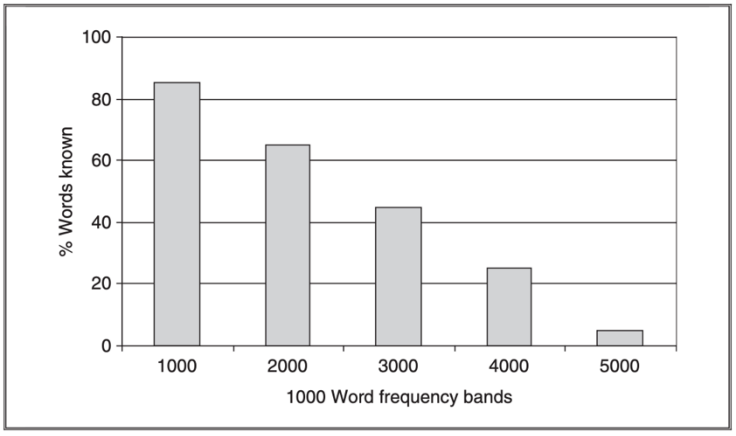

Figure 5 An Average Learner's Vocabulary Profile (Meara 1992: 4, cited in Milton 2009: 26)

Word frequency is a significant factor influencing vocabulary acquisition, though there are also other factors that need to be considered. The form of a word can be an obstacle to learning it. Words with unusual combinations of letters or sounds, or those that are difficult to pronounce, can pose a challenge for learners to retain them in their memory as well as use them and therefore impede vocabulary acquisition (Milton 2009: 35). Furthermore, words that are similar in form but differ in meaning can lead to frustration and confusion among learners (Milton 2009: 36). Laufer (1990: 148) provides an illustrative example from her experience with learners, noting that words such as *available* and *valuable* are often confused.

Even though specific word forms can sometimes be a struggle and impede learning, it can also be beneficial if the form of the word in the target language is similar or even the same as the one in the native language (Milton 2009: 36). Words such as *taxi, bar* or *hotel* or derivations of them appear in many European languages (they are for instance the same in German: *Taxi, Bar, Hotel*; or in French: *taxi, bar, hôtel*). Logically, these words are easier for the learners to acquire; they might only struggle with pronunciation (Milton 2009: 36). Nevertheless, this similarity in form can also be a burden if the words do not share the same meaning in the target and native language. This is called *false friends* and is very often a struggle for language learners. An example of this is the English word *sensible* and the German word *sensibel*. Even though they are written nearly the same, they have different meanings.

Another factor that might influence vocabulary learning is if words stand for an actual item or if they represent a concept (Gairns & Redman 1986: 68). For example, *chair* represents an item that actually exists and is definitely a part of every learner's life, yet words such as *justice or wisdom* cannot be shown and have to be explained. According to Gairns and Redman (1986: 68), abstract words are harder to acquire.

Lastly, a word's part of speech can also affect how easily it is learned. Typically, nouns are easier to learn than verbs, and verbs are easier than adjectives. Horst and Meara (1999: 324) studied a learner who read a comic book multiple times and analyzed the types of words the learner acquired. This study suggests that word class influences vocabulary acquisition. However, it is important to consider that the learner used visual cues from the comic book to infer word meanings. Nouns are often easier to visualize, whereas adverbs are more challenging to represent visually. For example, the participant identified that *hooivork* meant *pitchfork* from the illustration (Milton 2009: 37).

These mentioned factors can impact the likelihood of a word to be acquired. A cognate word, despite being infrequent and rarely encountered, might be quickly acquired due to its similarity to the C1 counterpart. Conversely, frequently occurring words that are longer or more different from the L1 may require numerous exposures before being memorized. Additionally, factors such as differences in connotations, associations, and collocations between the first and the target language can contribute to learning difficulty (Milton 2009: 38).

4.4 Measuring Vocabulary Breadth

Now that different fields of vocabulary acquisition have been discussed, it is important to address the measurement of vocabulary knowledge. Vocabulary testing plays a crucial role in lexical research, serving both as a widely used research tool and the subject of numerous studies. In the field of SLA, these tests are commonly used for various purposes, such as assessing proficiency in psycholinguistic studies or measuring vocabulary growth in learning studies. Beyond research, vocabulary tests are also frequently used in classrooms for diagnostic, placement, or motivational purposes, making them a key tool in language teaching (Durrant et al. 2022: 145).

There are several types of vocabulary tests available, each focusing on different aspects of vocabulary knowledge, such as breadth or depth (Durrant et al. 2022: 149). Measuring vocabulary breadth, which this thesis focuses on, is concerned with determining the number of words a learner can recognize. In this context, breadth, also often referred to as vocabulary size (Durrant et al. 2022: 148), refers to the number of words a learner understands, even if they are not able to use them actively in communication. Typically, breadth tests involve

assessing a learner's passive recognition of words, often through a list where learners identify words they know (Durrant et al. 2022: 148; Milton 2009: 71).

For a vocabulary breadth test to be effective, several key considerations must be taken into account. The test should be systematic and consistent, ensuring that results are comparable across different learners and contexts. This means that the test must be reliable, providing consistent results over time. It should also be valid, accurately measuring what it is intended to assess (Durrant et al. 2022: 151-154; Milton 2009: 17-18). Moreover, a well-designed test must clearly define what it means to 'know' a word—whether this refers to passive recognition or a broader understanding of the word's meaning in various contexts (Durrant et al. 2022: 146-148; cf. chapter 4.2.2). A good vocabulary breadth test should also consider word frequency, as learners are more likely to recognize the most frequent words in a language (cf. chapter 4.3). It is equally important that the test includes a range of words across different frequency levels to ensure that it accurately reflects the learner's vocabulary knowledge, avoiding the risk of overestimating vocabulary size based on a narrow set of familiar words (Milton 2009: 23-25).

Vocabulary checklist tests, which are among the most well-researched methods, are one option for estimating the breadth of vocabulary knowledge by receptive word recognition. These tests evaluate whether learners recognize words as real or not, serving as a fundamental measure of word knowledge. The test format involves presenting a list of words to learners, who mark the ones they know. Despite their simplicity, these tests can quickly assess a large number of words and yield reliable results due to their brief duration and large sample size. Moreover, test takers' rise of boredom and loss of concentration is kept at a minimum since the test is completed rather easily and quickly. This test format also allows easy creation of multiple test versions by selecting different words from frequency bands, often showing high correlations in results across versions (Milton 2009: 72).

However, these tests have drawbacks, particularly in how they handle guesswork. Learners might guess if they are unsure about a word, leading to either overestimation or underestimation of vocabulary size. To address this, some tests include false words that look real but do not exist, helping to adjust scores for overestimation. Across different cultural contexts, learners handle these formats differently (Milton 2009: 72-73). For example, Japanese learners tend to be conservative in their guesses (Shillaw 1999), while learners in Saudi Arabia and Greece guess more frequently (Al-Hazemi 1993, Vassiliu 1994); yet these

tests remain viable. However, if learners do not engage with the tests as expected, as with Belgian learners (Eyckmans et al. 2007) who frequently overestimated, leading to 60% of false words being identified as real, the resulting data may be invalid (Milton 2009: 72-73).

The V_YesNo (Meara 2015) is an example of a checklist test that provides estimates of vocabulary breadth within frequency limits and adjusts scores for guessing. It is loosely based on the Eurocentres Vocabulary Size Test (Meara & Jones 1990) with a reliable scoring system and a broad range of vocabulary knowledge (0-10,000 words) (Lognostics n.d.) This test format includes an equal number of imaginary and real words, simplifying the scoring process and reducing strategic guessing. The scoring system mitigates excessive penalties for guessing and is more lenient towards those who correctly identify most real words. The deduction for incorrect YES answers depends on the number of correct YES answers, thereby preventing negative scores – a problem in earlier tests. Test takers who correctly identify most real words receive only a minor penalty for one incorrect YES response, while those who identify few real words face a more significant penalty (Meara & Miralpeix 2016: 119). Regarding the application, V_YesNo is effective for intermediate and advanced learners within this spectrum, but it may be unreliable for beginners and those at lower proficiency levels (Lognostics n.d.).

Another common method for estimating vocabulary knowledge involves requiring learners to either recognize translations/explanations of foreign words or produce foreign words in response to native language prompts. While the format of recognition focuses on receptive vocabulary breadth and is known as a recognition test, the format of production addresses productive vocabulary knowledge and categorizes it as a recall test.

The Vocabulary Levels Test (VLT), created by Nation (1990) and adapted by Schmitt, Schmitt & Clapham (2001), is a widely used recognition test in which learners must match foreign language words with provided explanations (Milton 2009: 74). Nation (2022: 470) suggests working with the newest versions (such as McLean & Kramer 2015; Webb, Sasao & Balance 2017) as they use significantly improved word lists for determining frequency levels. The newer tests assess five distinct 1,000-word levels, including words from the first 1,000 to the fifth 1,000-word band of the British National Corpus (BNC) or the Corpus of Contemporary American English (COCA). Each level of the VLT requires the test taker to complete 27 or 30 items. The tests are available on Paul Nation's website. The results should be analyzed by first looking at the first level with high-frequency words, and if a learner scores well at this level (at least 90%), the focus should be on their performance on the second 1,000 level and so on

(Nation 2022: 470-471). The total score itself holds limited significance (Webb, Sasao & Balance 2017: 34). Regarding the proficiency of the test takers, this test format can be used to test lower levels of learners (Milton 2009: 115, Nation 2022: 476) as the VLT provides detailed information about each level, and not all levels have to be completed to receive a reliable result (Nation 2022: 471).

The VLT, however, has its disadvantages. Since the test taker has to understand the test word itself as well as the explanations to match them correctly, the test is unclear about what is being tested (Milton: 2009: 75). Additionally, each question includes several lexical test items, meaning that a learner's familiarity with some items can influence their ability to deduce answers for other, unknown items. As already mentioned, some learners tend to guess to boost their scores. This behavior, however, can be challenging for the VLT because it is difficult to determine the impact of guesswork in such tests, as there is no mechanism to calculate it (Milton 2009: 75, Nation 2022: 490). To tackle this problem, Nation (2022: 491) suggests setting a passing score of 90% or above to be considered a satisfactory performance.

If the test takers have a higher L2 proficiency, the Vocabulary Size Test (VST) is suitable for measuring vocabulary (Nation 2022: 471). The test includes words either until the 14th 1,000-word level or the 20th 1,000-word level, where the test takers need to choose the best definition or translation of a word from four possibilities. Moreover, bilingual versions are offered.

The VST has faced criticism for assessing EFL learners (Stoeckel, McLean & Nation 2021) because it evaluates vocabulary far beyond the frequency levels where most learners have consistent receptive knowledge (Nation 2022: 477). This often leads learners to guess the meanings of unfamiliar words and rely on test-taking strategies (Gyllstad, Vilkaite & Schmitt 2015: 293-294). One solution is to shorten the test by excluding lower-frequency words. This approach has both advantages and disadvantages. On the one hand, it reduces guessing and reliance on test-taking strategies and makes the test shorter and more manageable (Nation 2022: 477). On the other hand, it may limit the results since learners might know some lower-frequency words (McLean, Kramer & Stewart 2015,) due to cognates, loan words, personal interests, or specific life experiences (Nguyen & Nation 2011: 97-98, Nation 2022: 477).

In conclusion, an effective vocabulary breadth test should focus on the learner's familiarity with frequently used words in the target language to provide an accurate estimate of their

vocabulary utility for comprehension and communication. Vocabulary checklist tests, such as the V_YesNo, offer a practical method for assessing receptive word recognition by presenting a mix of real and imaginary words to minimize strategic guessing and adjust for overestimation. While these tests are efficient and reliable for intermediate and advanced learners, their effectiveness diminishes for beginners. The VLT and VST further complement these assessments by targeting different proficiency levels and providing detailed insights into learners' vocabulary breadth. However, each test has its limitations, particularly regarding guesswork and the clarity of what is being tested.

After explaining how language and vocabulary are acquired, the next chapter connects this understanding to engaging with English outside the classroom. It shows how participating in out-of-school English activities can be beneficial for learning the language.

5 EE Activities and Their Impact on Vocabulary Knowledge

This chapter presents evidence of the correlation between EE engagement and vocabulary knowledge. First, it reviews studies that examine EE activities in general and their connection to language proficiency and vocabulary knowledge. Subsequent sections delve into specific EE activities, analyzing their particular impact on vocabulary acquisition.

There are five general EE engagement studies on which this master's thesis is based and which are, therefore, crucial to mention. These studies were selected because, similar to this research, they do not concentrate on a specific type of EE activity but instead focus on overall EE engagement, thus providing a broader understanding of how various forms of informal language learning can impact vocabulary acquisition. Although these studies vary in the types of schools examined, they consistently focus on adolescents aged 12 to 18. In each study, a questionnaire was employed to collect detailed information on EE engagement, as well as linguistic and socioeconomic backgrounds. Other variables, such as attitudes towards the language or vocabulary learning strategies, were also examined in these studies; however, they are not part of the analysis in this thesis and will not be included in the summary of the studies. All studies support the positive correlation between engaging in EE activities and vocabulary knowledge.

Berns, De Bot, and Hasebrink (2007) conducted a comprehensive study involving over 2,000 students across Belgium, France, Germany, and the Netherlands. In addition to the questionnaire, a global self-assessment, a self-assessment with “can do” scales, and a vocabulary test developed by Meara (1992) with a Yes/No format were used to assess the participants’ English proficiency (Berns 2007b: 45-47). Their findings indicated that Dutch and Belgian students had greater exposure to English through media, primarily due to the prevalence of subtitles over dubbing (de Bot, Evers & Huibregtse 2007: 60). Furthermore, the parents of the bilingual Dutch group and the Dutch-speaking Belgians generally possessed a higher level of education and a higher proficiency level of English. It was found that these parents’ students also had more contact with English and a higher proficiency level themselves. The results of the German and French groups were more diverse; however, in general, these students did not have as much contact with English as their bilingual Dutch and Dutch-speaking Belgian counterparts (de Bot, Evers & Huibregtse 2007: 69). Additionally, the German and French exhibited lower scores on their vocabulary tests (de Bot & Evers 2007:

77). Regarding correlations and influences, the researchers stated that the parental proficiency correlated with the student's self-assessment. Moreover, the level of parental education influenced vocabulary test scores. Both self-assessment and vocabulary scores were impacted by personal contact with English, as well as exposure through media or vacations (de Bot & Evers 2007: 85).

A smaller-scale study was conducted by Sundqvist (2009) investigating 74 Swedish students' EE engagement and vocabulary knowledge using a questionnaire, a language diary, five speaking tests, and two vocabulary tests: the VLT and the Productive Levels Test (2009: 88-97). The relevant results for this thesis indicated that most students engaged in EE activities with a mean time of 18.4 hours a week (2009: 191). The favored activities included listening to music, playing video games, watching TV or movies, and spending time on the Internet (2009: 192). Among variables such as traveling abroad, parental education, number of books at home, and residency correlating with EE engagement, only residency showed notable significance. Students living in urban areas engaged significantly more in EE activities than their peers from rural areas (2009: 198). In addition to discovering a statistically significant relationship between EE and vocabulary knowledge (2009: 202), Sundqvist also indicated that active or productive EE activities had a stronger influence on vocabulary knowledge (2009: 203).

The doctoral thesis by Schwarz (2020) analyzed the situation in Vienna, Austria. Similar to Sundqvist (2009), this study aimed to examine the relationship between EE and vocabulary acquisition among 201 learners attending grammar schools (AHS) (Schwarz 2020: 122, 139). Schwarz also worked with a questionnaire and a language diary to document participants' EE activities (2020: 146). Two vocabulary tests were administered to assess students' receptive and productive vocabulary knowledge: Lex30 and V_YesNo (2020: 149). As a qualitative measurement, focus group interviews were conducted to gain detailed insight into teenagers' perspectives on their EE practices and the potential for language learning that these activities provide (2020: 182-183). The results support Sundqvist's (2009) findings since almost all participants engaged frequently in EE activities. The diversity of these EE activities varied widely among individuals (Schwarz 2020: 340). The most favorite activities were listening to music and singing along, followed by watching TV online, reading, and using social media (2020: 341). On average, the participants spent around four hours on EE activities per day (2020: 218). When analyzing socioeconomic status and receptive vocabulary size, Schwarz

detected a positive correlation (2020: 343), aligning with the findings of Berns, de Bot, and Hasebrink (2007). Moreover, learners recognized EE as beneficial for language development, with many believing that their informal language experiences contributed to their English proficiency (Schwarz 2020: 346).

Hahn (2017) completed another study conducted in Vienna, focusing on students from vocational business schools (HAS). Her questionnaire was based on Schwarz (2020), and she also tested vocabulary knowledge using the Lex30 and Meara's V_YesNo tests (Hahn 2017: 63). Similar to Sundqvist (2009) and Schwarz (2020), this study found that the most common EE activities were related to English music (listening, watching music videos, singing, reading lyrics, etc.), followed by watching video clips online, movies or series, and spending time on social media (2017: 78). Although the study does not provide an estimate of the time spent on EE activities, it indicated that the participants engaged in 5 daily and 13 weekly EE activities (2017: 80). Unlike Sundqvist (2009), Hahn (2017: 84-85) could not detect a stronger correlation between active EE activities and receptive vocabulary knowledge than that found with passive EE activities. Furthermore, no statistically significant correlation was found between socioeconomic status and vocabulary size (2017: 101), which matches Sundqvist's (2009) findings but contradicts the results of Berns, de Bot, and Hasebrink (2007) and Schwarz (2020).

A more recent study by Krüger (2023) investigated EE contacts among 2,487 German-speaking adolescents in Germany and Switzerland (2023: 96). Data was collected by assessing the participants' writing skills through four written essays, as well as their reading and listening skills using two reading and two listening comprehensions (2023: 98). Krüger (2023: 186) established that successfully writing an essay indicates great vocabulary knowledge. For this reason, this study is significant because the reading, listening, and writing test scores can be seen as indicators of vocabulary size. The favorite EE activities among students align with findings from the other researchers. The participants preferred to listen to music, spend time on social media, and watch movies or series (2023: 113-121). Moreover, the study revealed that students engaged in various activities, rather than just one, using different media channels (2023: 134). Krüger (2023) also investigated the variable of socioeconomic background; thereby, she identified a correlation with the frequency of EE engagement within her sample. Another correlation she revealed is that reading, listening, and writing skills correlated with reading books, watching movies, series, or online videos, surfing the web, or

gaming (2023: 163). This suggests that engaging in EE activities positively correlates with language competence (2023: 163).

To conclude, the reviewed studies share several common points, highlighting key themes and findings regarding EE activities and their relationship with English language proficiency. First, all studies consistently indicate a significant relationship between the amount of EE engagement and vocabulary knowledge. Second, a common finding across the studies is the predominance of music-related, social media-related, and TV-related activities. Third, most studies employed similar methodologies, primarily using questionnaires to gather data about students' EE engagement, attitudes toward English, and background factors. This consistency in methodology facilitates comparing the results. Fourth, the studies reveal a diverse range of EE activities that students engage in, such as gaming, social media, and online video consumption. This variety reflects the multifaceted nature of EE and its potential to enhance language skills through different mediums. However, no common ground was found regarding the influence of socioeconomic factors.

After having presented general EE studies, the following chapter investigates specific EE activities and their influence on vocabulary knowledge. While many of the studies reviewed focus on informal English learning environments, some research also examines EE activities within educational settings. These studies within an educational context are still relevant, as they demonstrate the potential impact these activities could have if practiced informally outside of school. Additionally, several studies focus broadly on language proficiency improvement; however, it is argued that such improvements also encompass vocabulary growth. Despite the different contexts and foci, all these studies provide evidence for the positive influence of these activities on vocabulary knowledge.

5.1 Extensive Reading

The term extensive reading (ER) describes someone who is immersing oneself in a large amount of longer, comprehensible texts, whether fictional or factual, over prolonged periods (Nation 2009, cited in Leather & Uden 2021: 1). Engaging in ER in the target language is an easily accessible activity for learners, requiring reading materials that personally interests and motivates them. Day and Robb (2014: 3) describe it as “an ideal out-of-class learning opportunity” emphasizing its flexibility to be practiced anytime and anywhere. They further assert that extensive reading significantly enhances learners’ motivation and attitude toward

the language while crucially improving their reading skills and expanding their vocabulary knowledge (Day & Robb 2014: 3).

Horst (2005: 366, 371) conducted a study supporting the beneficial effects of extensive reading on vocabulary growth by testing the vocabulary knowledge of 21 ESL learners with various proficiency levels and first-language backgrounds before and after a 6-week experimental extensive reading period. The participants freely chose books from a mini-library that included around 70 different books for different language levels (Horst 2005: 366-367). The median amount for books taken home and assumably read was 10.52. The pre-test tested words that appeared in books from the mini-library (2005: 367-368). The post-tests, on the other hand, were individualized for 17 participants containing 50 words from books they had read and 50 off-list words (2005: 372). The participants had to mark either "YES (I know what this word means)[,] NS (I have an idea about the meaning of this word)[,] or NO (I do not know what this word means)" for each word (2005: 365). The results showed a significant increase in vocabulary knowledge, with an average gain of seven words from the book word list and ten off-list words, totaling approximately 17 words. The most notable finding was the significant gain in off-list word knowledge, likely learned through ER. Participants reduced their unknown off-list words from 17 to 7, indicating they learned over half of the unfamiliar words encountered. A secondary measure confirmed these gains, showing new or partial knowledge in 18 out of 35 tested words. This suggests substantial vocabulary growth. However, this study has its limitations. Participants encountered relatively few unfamiliar words in the ER materials, as indicated by a large proportion of words rated as known before reading. This limited exposure could affect the validity of the vocabulary gains reported (2005: 376). Moreover, the study's findings relied on a limited set of self-rated words (100 items) and even fewer demonstrated knowledge items (one to three per participant). More extensive testing is needed, which would have been feasible as participants completed the rating and follow-up tests faster than anticipated. Lastly, participants engaged in various activities like keeping vocabulary notebooks, participating in reading discussions, and using dictionaries, which may have influenced learning outcomes. The impact of these activities was not accounted for in the study (2005: 376-377).

Webb and Chang (2015) focused on the impact of prior vocabulary knowledge on learning new words in an ER program. The study involved 60 Taiwanese secondary school students who were enrolled in the same EFL course. The learners engaged in an extensive reading

program, including audio versions for support. With the help of the bilingual VLT for the 1,000, 2,000, and 3,000-word levels, the students were grouped into high, intermediate, and low levels (Webb & Chang 2015: 657). At the beginning of this ER program, the learners completed a 100-item pretest. In the course of the first term (around 16 weeks), participants were involved in ER activities and were engaged in voluntary post-reading activities, such as journaling, role plays, and discussions. Vocabulary post-tests were given one week and three months after the last graded reader. The procedure was repeated in term 2 (around 16 weeks) (2015: 660-661). The target words for the pre- and post-tests were selected from the graded readers, excluding proper nouns and function words. Each test, similar to Horst's (2015) study, included 10 blocks of approximately 10 target words and one distractor, with the order of items changed at each interval to prevent learning effects from repeated testing. Moreover, the participants were unaware of these tests (Webb & Chang 2015: 658-659). The study revealed that, in general, there was a significant increase in vocabulary knowledge. However, high-level students showed greater vocabulary gains than low-level students. In term 1, high groups gained 63%, intermediate groups 45%, and low groups 28%. In term 2, the percentual gains were slightly lower for each group. Delayed post-test scores indicated retention of learned vocabulary for both terms (2015: 662-665). Regarding limitations, it needs to be kept in mind that there was a lack of control over the difficulty of two target word sets. Factors like word length, imageability, frequency, and text-specific elements (e.g. interference, redundancy, illustrations, and background knowledge) could have influenced learning outcomes (Webb & Chang 2015: 668).

Chang and Hu's (2018) study also provided evidence for the positive effects of ER on vocabulary knowledge. It involved 98 Year-10 Taiwanese senior high school students divided into higher and lower proficiency groups based on a reading placement test. To ensure correct placement, a VLT was administered (Chang & Hu 2018: 7). The study spanned 29 weeks, with a pre-test administered in the first week, followed by a 15-week treatment period where students read extensively in English during four 45-minute sessions per week. Post-tests were given in week 17 and delayed post-test in week 29 to detect vocabulary decay. The reading sessions were carefully guided by instructors to ensure comprehension and maintain interest. Voluntary after-reading activities, such as sharing opinions, writing journals, and book reports, were included to enhance engagement (2018: 10). The pre- and post-tests contained 100 target words from the graded readers. These words were divided into 10 blocks for multiple-

choice tests where the participants had to match the correct Chinese translation for each English word. The learners were not informed that there would be post-tests, and for these, the target words of the pre-test were rearranged (2018: 8-9). Data from 62 participants who completed all tests were analyzed, and the results showed that ER significantly improved their vocabulary knowledge. The high-level group showed an average learning rate of 69% compared to 20% for the low-level group. The learning rates were similar across different word frequency levels, indicating that word frequency did not significantly affect learning rates. However, the high-level group had a significantly higher overall learning rate than the low-level group, likely due to better comprehension of existing vocabulary knowledge. Both groups retained more high-frequency words, suggesting frequent re-encountering of these words during reading (2018: 10-11). While these results are promising, it is important to consider the study's limitations to fully understand its implications. Firstly, it measured only full knowledge of word meaning, not partial gains, thus not capturing the complete picture of student learning. This could lead to an overestimation of results due to the learning effect from repetitive testing, and students might lose motivation due to the frequency of tests. Secondly, target words were tested in a decontextualized manner, potentially affecting recall accuracy. Thirdly, the study did not explore word repetition's impact on learning gains despite evidence that multiple encounters with a word are crucial for learning (2018: 15).

Despite their limitations, these three studies provide evidence that ER positively influences vocabulary knowledge. Even though it is beneficial, many learners shun ER since it requires more effort than other activities (Sundqvist 2009: 128; Jakobsson 2018: 62). Zhang et al. (2020: 8) also discovered it to be the least involved practice and blamed the considerable time expenditure. Hence, it raises the question of how this challenging activity could become more attractive. Important for reading to be effective, the material must be on the level of the learner's language proficiency. So that the learner should not feel overwhelmed or bored when reading (Day & Robb 2014: 5). Moreover, it is crucial for the reader to personally choose the material to enhance motivation (Arnold 2009; Day & Robb 2014: 6). Finally, learners should read as much as possible, as the more time is spent on extensive reading, the more effective it will be for improving language skills (Day & Robb 2014: 6).

5.2 Movies and Series

Some countries, such as Belgium, Denmark, or the Netherlands, offer English TV programs with subtitles, which caught significant academic interest. First of all, d'Ydewalle and Gielen (1992) analyzed the reading of subtitles and discovered through evaluating eye movements that they are automatically read irrespective of whether the participants know the language or not. Sohl (1989) confirmed that also the soundtrack is processed when the TV program includes subtitles. Further, the studies of d'Ydewalle and Pavakanun (1995) analyzed whether language learning is taking place while consuming such programs, and they were able to provide evidence for vocabulary acquisition but not for acquiring the syntax of the target language. Their third study in 1997 even led them to the conclusion that "without any doubts […] there is considerable language acquisition simply by watching a short subtitled movie" (d'Ydewalle & Pavakanun 1997: 153). Several languages were researched, and 839 students aged 16 to 17 were participating. The movie shown was only 15 minutes long. Nevertheless, this study supports a correlation between watching TV programs, films, or videos in the target language with subtitles and an improvement in language skills.

Rodgers and Webb (2011) analyzed English television episodes and the vocabulary that is continuously encountered. To gain results, 288 television episode scripts were evaluated, and the findings indicated that watching a complete TV series with all episodes and seasons rather than various ones means encountering the same vocabulary numerous times. Consequently, Rodgers and Webb (2011: 712) argue that consistent viewing of a single TV series not only exposes learners to repeated vocabulary but also provides opportunities for deeper language processing, thereby contributing to language improvement.

Another study focusing on vocabulary improvement was conducted by Ashcroft, Garner, and Hadingham (2018). They focused on measuring the effect of watching a single, captioned, full-length movie in English on the incidental vocabulary acquisition of Japanese EFL learners. Specifically, the study aimed to determine whether watching a movie with captions could lead to immediate increases in word knowledge. Regarding the participants, 187 native Japanese undergraduate students aged between 18 to 23 years, having undergone at least seven years of English instruction, took part in the study and were grouped into an experimental group (143 students) and a control group (44 students) (Ashcroft, Garner & Hadingham 2018: 138). The experimental group began with a pre-test, then watched the first 60 minutes of the

English movie with subtitles and answered content-based questions about the movie. Two days later, this group discussed the first half of the movie and watched the rest. Afterward, they took the post-test. On the other hand, the control group took the same pre- and post-test but did not watch the movie during the study period (2018: 140-141). Test items were carefully chosen from the movie. A productive recall translation test was used to evaluate vocabulary gains. This method was chosen because it assessed whether learning has occurred in terms of meaning recognition (2018: 139). The experimental group showed a statistically significant mean gain of 1.77 words (approximately 4.2%), indicating that watching the movie led to modest incidental vocabulary learning. The control group showed no significant change in vocabulary knowledge, confirming that the gains in the experimental group were due to the movie viewing (2018: 141-142). Although the study did not include a delayed post-test for assessing long-term retention of the vocabulary and had some uncontrollable variables such as students rewatching the film or reviewing vocabulary on their own (2018: 143), these results provide evidence for the potential benefits of watching subtitled movies on incidental vocabulary acquisition.

Collectively, these studies underscore the potential of subtitled television and movies as tools for language acquisition, especially in vocabulary development. Furthermore, it seems that watching TV series is beneficial for language learning, particularly due to repeated exposure to vocabulary.

5.3 Fanfiction

Fanfiction is defined as stories created by fans that reimagine or extend existing narratives, characters, or universes from other media (Sauro 2020: 143). It can be distinguished between affirmational practices, such as consuming and discussing media, and transformative practices, such as creating fan art or writing fanfiction (Sauro 2020: 139). Participants of these fan communities meet each other in real life or online and exchange interests about a specific book, movie, or TV series (Sundqvist & Sylvén 2016: 126), which can be categorized as affirmational. Others might compose their own plot texts and share them with others, thereby, they often receive feedback (Sundqvist & Sylvén 2016: 126). This counts as transformative practice. Engaging in fanfiction provides rich opportunities for language learning, particularly in developing writing skills, grammatical competence, and vocabulary. It is a participatory culture that encourages fans to actively engage with language in creative

ways, often pushing them to learn new vocabulary and language structures (Sauro 2020: 146-147).

Black (2005) was interested in the effects of fanfiction on language proficiency. The study specifically investigates how digital fanfiction spaces provide ESL learners with access to literacy learning and promote their connection to writing in English. The focus lay on adolescent ESL learners who actively participated in an online fanfiction community (Black 2005: 118-119). The researcher observed participants for a year and analyzed publicly posted interactions, fanfictions, and peer reviews to understand how ESL learners construct themselves as legitimate members of the community and how they use the resources available to them in their writing. Moreover, the design and structure of the website were examined and how these elements facilitated the participants' access to literacy learning and affiliation with writing in English (2005: 120). Black found that these online communities offer ESL learners access to an environment where they can practice writing in English, receive constructive feedback, and engage in meaningful social interactions (2005: 126-127). For this reason, ESL learners are likely to improve their language skills when being part of a fanfiction community.

In addition to these findings, it is important to consider the implications of vocabulary growth within these digital spaces. These meaningful interactions often involve requests for feedback and corrections, leading to learners being made aware of and rectifying incorrect word usage. This process contributes to the expansion of their vocabulary (Sauro 2020: 146). Another factor that drives vocabulary acquisition is the necessity of using appropriate vocabulary to create compelling narratives (2020: 146). Lastly, readers and writers of fanfiction are often exposed to new words within specific narrative contexts, aiding in vocabulary retention and understanding (2020: 144).

Therefore, it can be assumed that participation in these online fanfiction communities not only enhances general language proficiency but also facilitates vocabulary development through interactive and corrective discourse within the community.

5.4 Social Media

With the advent of the Internet, there was also the rise of social media, which can play a major role in language learning, as researchers suggest in their studies. Lomicka and Lord (2012) were interested in the platform Twitter (now called X) and investigated the opportunities for

language acquisition. Thirteen participants from the USA were required to tweet weekly in the target language for over 9 weeks. Moreover, French students studying English at university were also asked to participate by posting on Twitter (2012: 52). Lomicka and Lord (2012: 58) discovered that out-of-class tweeting built a community that the participants highly appreciated. Through sharing information about their personal lives in the target language and reading such content of others, the students were able to encounter the L2 also outside the classroom. For this reason, Twitter has considerable potential for second language acquisition (2012: 59).

Jones (2015) supported the idea of social media positively influencing language learning, focusing on informal L2 learning. Her quantitative study examined the learning practices of 12 subjects who aimed to acquire Welsh, a minority UK language (Jones 2015: 4). Since the language is spoken by only a small number of people, learners often face difficulties in hearing and practicing this uncommon language. For this reason, social media can act as a learning platform for those desiring to improve their Welsh (2015: 1). Even though it is a small study, Jones' results help to understand how informal learning with the help of social media takes place. The study provided evidence that all 12 participants made use of social media to improve their proficiency in Welsh; however, how and what they used exactly differentiated to a large extent (2015: 7). Possible ways of improving the language were "us[ing] sharing facilities to watch Welsh television [programs] or films, video on YouTube or [downloading] music and us[ing] free resources such as those provided on the BBC website" (2015: 8). Moreover, the subjects were writing emails, following Welsh posts and skyped with others in the target language. Advanced Welsh learners even blogged or created a community of Welsh learners with the help of Facebook (2015: 8). This provides evidence for social media allowing L2 learners to chat, interact, read, or listen to the target language and thereby, their language skills improve.

By conducting an online survey with over 6,000 participants, Hamat and Hassan (2019) continued to validate the correlation between social media and informal language learning. People between the ages of 17 and 35 completed the online survey, which was created with the tool SurveyMonkey (2019: 73-75). Concerning the findings of the study, a compelling amount of 99.7% answered that they made use of social media for learning English (2019: 74), and 97.4% regarded social media as beneficial for boosting their language skills (2019: 75). The areas that social media was most helpful with is listed in the following in descending order

in terms of helpfulness: writing and communications skills, vocabulary knowledge as well as reading skills. Social media was least beneficial for grammatical knowledge as well as listening and speaking skills (2019:75-76). This study, unfortunately, did not investigate in detail how the participants used social media to improve their language skills. Still, it presents an impressive number who believe it is helpful for their English acquisition.

The studies discussed above support the potential of social media as a tool for L2 learning, particularly in informal settings. However, they primarily focus on overall language acquisition rather than specifically on vocabulary development. Only Hamat and Hassan (2019) highlighted the role of social media in improving vocabulary, ranking it second in importance after writing and communication skills. Vocabulary is a fundamental component of reading, listening, writing, and speaking abilities (Nation 2022: 218). Therefore, when research indicates that social media enhances language learning, it can be assumed that vocabulary acquisition is also positively impacted. Moreover, vocabulary is seen as important to overall language proficiency and L2 teaching and learning (Uchihara & Clenton 2020: 540). In relation to the Internet, Peters et al. (2019: 749) assert that increased exposure to English online allows learners to receive more input than they would in traditional classroom settings, thereby fostering vocabulary growth. Similarly, Sundqvist (2009: 155-156) found that internet-related activities are among the most significant EE activities leading to greater vocabulary expansion.

5.5 Digital Gaming

Another field of interest concerning EE is digital gaming. Many different sorts of video or computer games have been developed over the last decades, including single-, multi- or massively multiplayer games, which researchers thought would be advantageous for second language acquisition. Turgut and Irgin (2009), for example, focused on Turkish children playing computer games for many hours in Internet cafés. The results, discovered through observations and semi-structured interviews, suggest that digital gaming facilitates vocabulary acquisition as participants developed strategies “such as guessing from the context, looking [words] up [in] online dictionary, asking […] a friend sitting close by and people who know English” (Turgut & Irgin 2009: 762). Moreover, playing computer games increases motivation to learn the language since the players desire to comprehend the oral and written information and dialogues in the game (2009: 763).

Sundqvist and Wikström (2015) provided further evidence supporting the positive relationship between digital gaming and vocabulary knowledge. They collected data with the help of a questionnaire, language diaries, vocabulary tests, assessed essays, and final grades (Sundqvist & Wikström 2015: 68). Moreover, the participants were categorized into three groups according to frequency of gaming to enable proper data analysis. The results of the vocabulary tests revealed that participants who frequently engaged in digital gaming achieved the highest scores (2015: 71). This suggests that consistent exposure to English in a gaming context enhances vocabulary acquisition. Additionally, the analysis of the participants' essays indicated that these frequent gamers not only acquired more vocabulary but also integrated this advanced vocabulary into their writing (2015: 71). It can be assumed that the benefits of gaming extend beyond passive vocabulary recognition to active language use. Furthermore, the study determined a positive correlation between digital gaming and final grades (2015: 72), highlighting digital gaming as an effective tool for enhancing overall language proficiency. It is important to note that these findings applied to the male participants and not to the females (2015: 72). A reason for this could be that the group including frequent gamers only consisted of boys because the only girl in this group, unfortunately, dropped out during the study (2015: 70). Even though there are some limitations, such as the small number of participants in the frequent gamers group and that no conclusions can be drawn because of the study design, the study presented "a positive relation between gameplay and L2 English – at least for boys" (2015: 74).

Jensen (2017) also drew this correlation, which further supports the advantages of gaming. The study investigated EE use in general and the connection between language learning and gaming. The participants were young Danish English language learners between the ages of 8 and 10 who had to complete a vocabulary test as well as fill out a language diary. According to the results, girls preferred, in this sequence, listening to music, watching TV, and gaming as EE activities. The male participants, on the other hand, favored, in this order, gaming, watching TV, and listening to music (Jensen 2017: 8). Concerning gaming, the study indicated that for every 240 min of gaming including spoken and written English, the participants scored 10 points higher in the vocabulary test, meaning the more the children spent time with digital gaming offering both spoken and written English, the higher was their test score (2017: 12). In line with the others mentioned, Jensen supports the claim that vocabulary acquisition takes

place when gaming. Furthermore, she backs up the finding of Sundqvist and Wikström (2015) that more boys than girls spend their time with this EE activity.

In a more recent study, Sundqvist and Nilsson (2022: 14) explored the relationship between online gaming habits and vocabulary acquisition and listening comprehension among 52 young (aged 11 to 12 years) learners in Sweden. Additionally, the study investigated how gaming preferences might influence vocabulary acquisition (Sundqvist & Nilsson 2022: 14). The researchers gathered information by having the participants complete a short questionnaire about their engagement with EE activities. The questionnaire included questions about how often they watched English-language TV shows, played video games in English, listened to English songs, watched/listened to YouTube clips in English, communicated in English with family or friends, and read in English. They answered by selecting one of four frequency options: never, rarely, often, or always. The questionnaire also asked for information about their preferred programs and games (2022: 16). The participants were divided into two groups based on their gaming frequency. The researchers used the Picture Vocabulary Size Test (PVTS) to measure the participants' receptive vocabulary knowledge. The PVTS is designed to estimate knowledge of English word families. Test takers saw pictures on a screen and heard a sentence containing the target word. They selected the corresponding picture that matched the word. Moreover, a listening comprehension test was used to assess the learners' listening skills (2022: 17). Even though the study is small in scale and further research would be necessary (2022: 18-19), Sundqvist & Nilsson's results contribute to understanding the relationship between gaming and vocabulary learning. The researchers discovered a significant positive correlation between gaming frequency and vocabulary size. The frequent gaming group had a notably higher mean vocabulary score than the group that gamed less. Regarding listening comprehension, the researchers found a weak but non-significant correlation. Most participants preferred multiplayer games. The group of frequent gamers reported playing a broader range of games. Many of these games required active communication, which potentially contributed to their superior vocabulary scores (2022: 17-18).

The studies reviewed consistently demonstrate a positive correlation between digital gaming and vocabulary acquisition. Additionally, frequent engagement and playing games that incorporate both written and spoken English appear to significantly enhance vocabulary knowledge.

5.6 Podcasts

In the last decade, the number of podcast listeners worldwide has steadily increased and reached nearly 384 million in 2021 (Statista 2021). Given podcasts' popularity and accessibility, it is essential to explore how this medium can contribute to language learning, particularly vocabulary acquisition.

The first study presented is set in the educational context, however, it still provides evidence of how podcasts can be beneficial for language learners. Chi and Chan (2011: 24) provided a podcast for 64 beginners of Korean who had no prior language knowledge. It was presented as an additional non-obligatory learning opportunity alongside the Korean beginner language course they enrolled in (Chi & Chan 2011: 24). Ten episodes intended to motivate pupils to take part in "independent and more mobile learning beyond the classroom" to offer learners more listening practice, to provide students with grammar and vocabulary revision and to present the participants with interesting facts about Korean culture (2011: 25). The podcasts can be classified as a complementary educational tool to the course in which students participated. Chi and Chan discovered that even though the podcast was non-compulsory, nearly everybody (96.7%) listened to at least some episodes of it. Moreover, the participants deemed the extra activity as useful and were content with the topics of it. Concerning the topics, students were most pleased with information about Korean culture, second most with advice as well as practices for pronunciation, and third most with listening comprehension (2011: 31-32). The results suggest that listening to podcasts is an activity that learners enjoy and that it supports their language-learning process.

A more recent study by Indahsari (2020) substantiated the advantages of podcasts as well. The author reviewed studies between the years 2010 and 2020 and two themes were identified, the first being about the impact of podcasts on motivation and the second about the potential they have on language learning (2020: 105). With regard to the former theme, the study highlighted the positive effects. The myriad content choices allow learners to find some they are interested, in which again increases motivation for listening and for learning. Their preferences can be satisfied because of the abundance. Due to increased motivation, "podcasts can enhance student[s'] performance" (2020: 106). When investigating language learning opportunities, Indahsari (2020: 107) confirmed the beneficial qualities of podcasts for L2 acquisition, particularly for listening skills.

While the studies discussed above highlight the general benefits of podcasts for L2 learning, the following research focuses specifically on the effects of podcasts on vocabulary acquisition. Hakobyan (2022: 79) explored the impact of extensive listening to podcasts on incidental vocabulary learning of 22 Armenian high school learners of English. Specifically, it aimed to understand how the frequency and distribution of target vocabulary in podcasts affected incidental vocabulary acquisition (Hakobyan 2022: 79). The participants were randomly divided into an experimental and a control group. The experimental group listened to weekly podcast episodes, participated in follow-up discussions, and completed a podcast journal. In the control group, on the other hand, the learners took part in their regular classes and did not listen to any podcast episodes (2022: 85). The researchers applied the Updated VST as pre- and post-test for assessing general vocabulary knowledge. Moreover, they integrated a project designed pre- and post-test including words from the podcast episodes. Additionally, learners completed digital listening journals, which provided insights into how they applied the input, as well as their motivation and interest in both the listening activities and the topics covered. Lastly, a post-survey was completed to gain information about the participants' attitudes toward the project, the podcast episodes, and their own perspectives on their vocabulary learning (2022: 84-85). Regarding the results of the study, the researchers discovered that extensive listening to podcasts led to significant vocabulary growth (2022: 87). Additionally, the frequency of vocabulary had a positive effect on vocabulary learning (2022: 90). This observation aligns with Milton (2009: 26) who also emphasized that the frequency of occurrence is a key factor that benefits vocabulary acquisition (cf. chapter 4.4). Moreover, the attitude toward podcasts was highly positive, and 95% of the learners agreed that podcasts could contribute to vocabulary learning (Hakobyan 2022: 89).

The studies discussed in this chapter demonstrate the potential of podcasts as a powerful tool for vocabulary growth among language learners. By offering diverse content that caters to individual interests and provides flexibility in learning, podcasts create an engaging and effective environment for SLA.

5.7 Listening to Music

Engaging with English music nowadays is easy since it is conveniently accessible via mobile phones or laptops. Media such as YouTube, Spotify, Apple Music, and Deezer offer songs and complete albums of millions of English singing artists. Moreover, most radio stations in Austria

play more English songs than German ones. Therefore, English music surrounds the L2 learner and offers great potential for language learning.

A study researching the potential of music was conducted by Medina (1990). The study investigated the effects of music on vocabulary acquisition by comparing it with storytelling and showing illustrations as two control factors. The participants from elementary school were divided into four groups, listening either to a told or a sung story and with or without showing illustrations of words appearing in the story (1990: 11). She indicated that vocabulary is acquired through music to the same extent as through listening to a story. In terms of accompanying the story with illustrations, the highest vocabulary gain was yielded by a combination of music and illustrations (1990: 12-14). This study does not support the potential of just listening to music for language learning. However, it is interesting to note that the combination of music and illustrations proved advantageous. A possible explanation for this could be that the participants, aided by the illustrations, were more involved in the activity. Increased involvement can result in improved language learning (cf. chapter 4.1). It is important to note that this study examined a sung story rather than a song, which may yield different results due to the distinct structure of songs, such as their repetitive choruses.

Focusing on the effects of listening to songs, Pavia, Webb, and Faez (2019) conducted a study with 300 Thai public school students in fifth and sixth grades who completed pre- and post-vocabulary tests and were divided into experimental and control groups. The results show a small gain in incidental vocabulary acquisition (Pavia, Webb & Faez 2019: 761). Although the increase is not significant, the researchers emphasize the possibilities of learning if "learners [are] exposed to larger quantities of input with repeated exposures to vocabulary items" (2019: 762).

According to Akbary, Shahriari & Fatemi (2018: 352), outside-of-class English learning is possible through music; however, the learners must focus on form to be successful. The potential is mediocre when the listeners only pay attention to rhythms and melodies.

To conclude, these studies cannot confirm major L2 gains through just listening to music but only minimal gains. Yet, an improved outcome is suspected through repetition and increased involvement with the lyrics, as the Depth of Processing Hypothesis and the Involvement Load Hypothesis suggest (cf. chapter 4.1). For music to function as a successful EE activity, learners

could increase their chances of acquiring vocabulary by reading the lyrics, looking up unknown words, and listening to songs repetitively.

These studies on various EE activities presented in this section clearly provide evidence for the correlation between EE activities and vocabulary learning. It is important that learners choose how to spend their time to increase motivation for learning and, in general, yield the best outcome in the language learning process. In several studies, participants indicated that the ability to choose activities that matched their interests or preferences positively influenced their motivation and engagement in the language learning process (Black 2005 Chi & Chan 2011; Hamat & Hassan 2019; Indahsari 2020; Jones 2015; Sauro 2020). In terms of choice, the Internet provides willing learners with a multitude of possibilities where each of them can find a suitable, custom-fit EE activity. This then can have a positive influence on vocabulary skills. More studies in this area should be promoted to facilitate an even better understanding of these processes. The research presented in the following chapter aims to contribute to this ongoing exploration and enhance understanding of these critical concepts.

6 Methodology

The purpose of this chapter is to provide a detailed description of the research conducted throughout the year 2023. The study involved collecting data from students attending a vocational college for social management (HLS) and a vocational school for social occupations (FSB). The objective was to explore their extramural habits and investigate possible correlations between these activities and their vocabulary knowledge. Several studies on the impact of EE activities already exist (cf. chapter 5). However, the number of studies focusing on Austrian learners remains limited. Two Austrian researchers are Schwarz (2020), who wrote her doctoral thesis focusing on grammar school (AHS) students, and Hahn (2017), who composed her master thesis directing her interest on vocational business school (HAS) students.

Given the scarcity of research on Austrian learners, further investigation is essential to improve the understanding of their language learning processes. This information is particularly valuable for English teachers who can only observe in-school learning processes. The data collected through this study gives insights into language learning activities that occur outside the classroom.

The following sections elaborate on the methodology employed in this master's thesis project. The research design is discussed in detail, followed by the presentation of the research questions and an introduction to the participants. Lastly, the materials used in this study are described.

6.1 Research Design

For the design of this research, inspiration was drawn from Berns, de Bot, and Hasebrink (2007), Sundqvist (2007), Hahn (2017), Schwarz (2020), and Krüger (2023), who all investigated engagement in extramural English activities in general and not a specific one (cf. chapter 5). A qualitative approach was applied to gather information.

The study employed a questionnaire to gather and a receptive vocabulary test for qualitative data. This combination enabled a comprehensive understanding of EE engagement among students in an Austrian HLS and FSB. In terms of analysis, the gathered data on students' EE activities (from the questionnaire) and their receptive vocabulary breadth (from the vocabulary test) were analyzed with the help of descriptive statistics. To examine the

relationship between EE activities and receptive vocabulary breadth, inferential statistics were applied.

The following research questions guided this study:

- ⇒ **RQ1a**: What EE activities are the students engaged in?
- ⇒ **RQ1b**: How much time do they spend on EE activities?
- ⇒ **RQ2a**: What is the correlation between EE activities and students' vocabulary breadth?
- ⇒ **RQ2b**: In what ways does the EE engagement of students with high and low receptive vocabulary knowledge differ?
- ⇒ **RQ3a**: In what way does the socioeconomic background of the FSB and HLS students differ?
- ⇒ **RQ3b**: How does the socioeconomic background correlate with the EE engagement of the participants?
- ⇒ **RQ3c**: How does the socioeconomic background correlate with the vocabulary breadth of the students?
- ⇒ **RQ4**: What are the differences or similarities between the EE engagement of FSB and HLS students?

The research questions in this study are crafted to explore the connections between EE activities, vocabulary knowledge, and socioeconomic background among Austrian students. The first two questions seek to understand the linguistic habits of Austrian students by identifying the types of EE activities they engage in and measuring how much time they spend on these activities. Descriptive statistics are used to provide a clear picture of how students engage with EE activities. Research questions 2a and 2b focus on exploring the relationship between students' involvement in EE and their receptive vocabulary knowledge. Inferential statistics are applied to examine these relationships. However, it is important to note that the study does not aim to establish cause-and-effect relationships. As pointed out by Cohen, Manion and Morrison (2018: 93), determining causality would require analyzing all possible factors, which was beyond the scope of this research. Since vocabulary learning is influenced by many factors (Sundqvist 2009), this study focuses on identifying correlations.

To explore another factor that might influence receptive vocabulary gain, research questions 3a, 3b, and 3c address the correlation between the socioeconomic background of the students

on their EE engagement as well as their receptive vocabulary breadth. The final question aims to identify any differences or similarities in EE engagement between students from the two different school types, HLS and FSB.

The research design of this study differs from traditional experimental approaches, where researchers typically work with random sampling of participants and include both an experimental and a control group (Cohen, Manion & Morrison 2018: 391-392). In this study, the participants were selected based on the researcher's position as an English teacher at the school. Additionally, the study examines the students' existing EE habits without introducing new variables or interventions. This design allows the study to detect possible correlations between EE activities, socioeconomic background, and vocabulary knowledge within the natural context of the students' lives. While the study was limited by time and resources, preventing the inclusion of other potential factors, it nonetheless provides valuable insights into the relationships between these key variables and how they may correlate with vocabulary development.

6.2 Participants

The participants of this study were students from a lower Austrian vocational college for social management (HLS) and a vocational school for social occupations (FSB), specifically from the second and third grades, typically catering for students aged 15-17. Originally, the total sample size was 90 students, but this number was reduced to 81 due to absences on the day of data collection or an incomplete vocabulary test. The distribution of students across the classes is shown in table 4, while table 5 illustrates the distribution of those who participated in the research project.

Table 4. Distribution of Students in Classes

Total N=90	HLS	FSB
	number of participants	number of participants
2nd grade	22	18
3rd grade	23	27

Table 5. Distribution of Participants in Classes

Total N=81	HLS	FSB
	number of participants	number of participants
2nd grade	19	17
3rd grade	20	25

Although the sample size is relatively small, this is not uncommon in educational research, as evidenced by the literature on EE activities and their impact on vocabulary knowledge (cf. chapter 5). The insights gained from this study highlight possible correlations, but due to the limited number of participants, the results should be interpreted with caution (Cohen, Manion & Morrison 2018: 203). Further research with larger sample sizes is necessary to support these findings.

The selection of the school and the specific types (HLS and FSB) was based on the researcher's role as a teacher at the institution, which provided practical advantages given the time and resource constraints. The choice of classes was influenced by the researcher's direct involvement as a teacher in the 3rd grade HLS and FSB. To enhance the sample size, additional data was collected from another class taught by a colleague after obtaining her consent. Before starting the research, approval was requested and received from the headmistress and the Educational Authority of Lower Austria (Bildungsdirektion Niederösterreich). The students were fully informed about the study and were required to have their parents sign a consent and information sheet. Participation was voluntary, and students were assured of their anonymity and confidentiality.

In the Austrian school system, the second and third grades in these vocational schools correspond to the 10th and 11th school years, respectively. Students in the HLS program graduate after five years (13 years of education) with a final exam called Matura, which qualifies them for university admission. The curriculum focuses on social economy, with internships in the 11th and 12th grades, preparing students for careers in administration, organization, and accounting within the social and healthcare sectors. In contrast, the FSB program is completed after three years (11 years of education) with a final exam that does not qualify students for university. The FSB curriculum provides foundational knowledge in social care and health, equipping students for roles in elderly, disability, and family care, and includes the option to qualify as a kindergarten teacher's assistant. Due to the predominance of female students in these school types, gender distinctions were not made among participants.

Regarding language proficiency, the curricula do not specify the CEFR (Common European Framework of Reference) level for each school year. By the end of the HLS program, students are expected to reach a B2 level (BMBWF, 2015a), while FSB students are expected to achieve a B1 level (BMBWF, 2015b). The textbooks used by the students reflect these levels: HLS

students use *Best Shots HTL/HUM* published by hpt, and FSB students use *Focus on Modern Careers* published by Veritas. According to these resources, second-grade HLS and FSB students are at the A2/B1 level on the CEFR scale, while third-grade students are at the B1 level. *Best Shots 3 HTL/HUM* (Gottinger, Pargrieder & Norris 2022), however, includes B2-level exercises, suggesting that the language level for 3rd-grade HLS students can be considered B1+

In examining the linguistic backgrounds of the students, it was crucial to determine whether any participants were native speakers of English. Including native speakers could potentially falsify the results and thus cannot be included in the study. After inquiring with the headmistress and my colleague, it was clear that there were no native speakers in these classes. Regarding languages they speak with their families, the majority of participants (84.94%) primarily spoke German. A minority of participants spoke other languages at home, including English (6.33%), Croatian or closely related languages such as Bosnian and Serbian-Croatian (2.40%), Turkish (1.20%), and Hungarian (1.20%). Most of the participants have been born in Austria, with only two participants originating from Ethiopia and Bosnia. These findings highlight a predominantly German-speaking environment with only a minority contributing to linguistic diversity.

6.3 Instruments

The study used two different instruments to gather information about the participants, a questionnaire and a receptive vocabulary test. Both instruments included a code field, where students generated personal codes. This measure ensured anonymity and facilitated the matching of questionnaires with the corresponding vocabulary test. In the following, it will be discussed what each instrument assesses, how they function, and their advantages and disadvantages.

The questionnaire (see appendix), created by Schwarz (2016), was shortened and adapted to fit the needs of this study. It consisted of five sections that collected information on different topics. The first part inquired about the participants' digital devices, media, and Internet use. Moreover, items about the general free time activity of the students were included. The second section asked about EE activities participants engage in and their frequency. Additionally, it contained questions about time spent on EE activities during their Easter break, languages spoken outside of the school context, and why they prefer to speak English in their free time. Part 3 asked about where they pick up English most often in their surroundings. The

fourth section inquired about the participants' linguistic background, and the final part collected information about their socioeconomic background. Most of the questionnaire items were multiple choice or rating scales. This allows the analysis of a large amount of data, and it facilitates the comparison of this data (Cohen, Manion & Morrison 2018: 477). However, these items are limited by their fixed nature, requiring respondents to select from predetermined choices, which might not entirely reflect their true opinions (Cohen, Manion & Morrison 2018: 485). Therefore, the questionnaire also included some open items that provided deeper insight into participants' thoughts and opinions (Cohen, Manion & Morrison 2018: 476).

To be able to correlate EE activities with vocabulary breadth, the V_YesNo (Meara 2015) was applied (see appendix). This test measures a learner's vocabulary size by presenting a list of words where the test-taker must indicate whether they know the meaning of each word or not (Meara & Miralpeix 2016: 115; cf. chapter 4.5). A total of 200 words, with 100 being real words and the other 100 being imaginary words, have to be scanned by the test-taker (Meara & Miralpeix 2016: 118). Imaginary words are included to reduce guessing. These non-existent words serve as a check against test-takers who might guess that they know a word. If participants indicate they know a significant number of these imaginary words, it suggests they are guessing rather than relying on genuine knowledge (Meara & Miralpeix 2016: 118). Despite their utility, the use of imaginary words has drawn criticism. Some argue that these words might not be as effective or fair for all participants, particularly if some imaginary words closely resemble real words in certain languages, which could mislead test-takers and skew the results (Meara & Miralpeix 2016: 130; cf. chapter 4.5).

Nevertheless, the use of imaginary words is a practical solution to control guesswork. By including them, the test can more accurately assess whether a test-taker genuinely knows a word or is simply guessing (Meara & Miralpeix 2016: 118; cf. chapter 4.5). Moreover, the test employs a sophisticated scoring system that adjusts for the presence of false alarms. These are incorrect identification of imaginary words as real. This method prevents over-penalization and ensures that the test remains fair and accurate for different types of learners (Meara & Miralpeix 2016: 118-119). Additionally, the V_YesNo test has been shown to correlate well with other measures of language proficiency, such as grammar, reading, and writing. This suggests that the approach is valid and that any potential downsides are outweighed by the overall accuracy and efficiency of the test. The test's ability to adapt across languages and its

positive reception among test-takers further support its effectiveness (Meara & Miralpeix 2016: 114, 130).

The V_YesNo test is particularly effective for learners at intermediate and advanced levels of language proficiency. However, the test is less reliable for beginners, as their vocabulary size typically falls below 1,500 words, where the test does not perform as accurately (Meara & Miralpeix 2016: 117). The participants were attending a second- and third-grade HLS and FSB with a language level range from A2 to B1+. They learned at least 6-7 years of English, minimizing the chances of a score below 1,500 because they are no longer beginners. Therefore, this test format fits the participants of this study.

Reasons for choosing this test format, besides the above-mentioned advantages, were its easy handling, quick execution, and evaluation. Moreover, this format minimizes boredom and loss of concentration for the test-takers due to its brief duration and simple completion (Milton 2009: 72). Because of the personal connection to the participants, I assumed that with a clear explanation of how the test works and kindly asking for genuine answering I could reduce guesswork.

6.4 Data Collection

Data collection took place in April and May 2023. Before collecting the data, I provided detailed information about the study and its objectives to all classes involved. During these sessions, I addressed any questions that arose and inquired if any students preferred not to participate. Then, parental consent forms were distributed. Students in my colleague's classes were instructed to return the signed consent forms to her, while my students were asked to submit theirs during my lessons. After all parental consent forms were collected, my colleague and I coordinated to schedule specific dates when I could substitute for her in the second-grade classes and conduct the research. This arrangement ensured that I was present during the data collection in all the classes, enabling me to address any issues or questions that might arise.

The data collection was completed during one lesson, with an extra 15 minutes added during the following break. The teachers scheduled for the following period were informed in advance, allowing them to provide the students with a brief break to prevent any feelings of stress caused by working through the break.

The data collection began with the questionnaire, giving students no more than 40 minutes to complete it. Before distributing the vocabulary test, I reminded the students that they might encounter unfamiliar words and encouraged them not to feel stressed. Additionally, I emphasized the importance of honesty and asked them not to guess, as the inclusion of pseudowords could negatively affect their scores. I reassured the students that the test was anonymous and that their performance would not impact their school grades in any way. The sole purpose of the test was to contribute to my research. Students were given 15 minutes to complete the vocabulary test.

6.5 Data Preparation

This section provides information about preparing the data. In general, the analysis was done with the programming language Python using a Jupyter notebook. The following code libraries were used: NumPy, Pandas, Matplotlib, and SciPy. Preliminary adjustments were required to enable a thorough statistical analysis of the questionnaire and vocabulary test data. These steps are outlined in the paragraphs that follow.

To quantify the level of engagement in EE activities among participants, an overall EE activity score was calculated for each student. Participants indicated their frequency of engagement on a scale from 1 (never/rarely) to 5 (daily). The students' scores from each activity were summed to generate a general EE activity score, providing an overall measure of how frequently each student engaged in EE activities. The score allowed a comparative analysis of engagement levels across the sample. Additionally, EE activities were classified into two categories: receptive (R) and productive (P). This classification was implemented to analyze whether the type of skill necessary for EE activities – involving understanding (receptive) or producing (productive) – correlated with the participants' receptive vocabulary breadth.

A comparable variable had to be calculated to compare the socioeconomic background data of the students. The questionnaire gathered information about the parents' educational levels, occupations, job duties, and the number of books in the home. Using this information, the social status (S) of each participant was calculated, following the methodology outlined by Pham, Freunberger & Robitzsch (2014). The calculation required the Highest International Socio-Economic Index (HISEI), which was determined using the International Standard Classification of Occupations 2008 (ISCO-08) to categorize the parents' occupations (Ganzeboom, De Graaf & Treiman 1992; International Labor Organization 2023). In cases

where the job titles or descriptions provided by participants were unclear, I assigned them to the most appropriate category based on my best judgment; if this was not possible, these were classified as invalid. The highest ISCO-08 code among the parents was then used and converted into HISEI. Parental education, another critical parameter in the social status calculation, was determined by the highest educational level attained by either parent and categorized according to Pham, Freunberger & Robitzsch (2014). The final parameter used in calculating social status was the number of books at home. The number of books was converted into the book code ranging from 1 to 6. By integrating these parameters—occupational classification, parental education, and book ownership—the overall social status (S) of each participant was determined. The social status (S) ranges from a minimum value of $Smin = -2.2938$ to a maximum value of $Smax = 2.3292$.

The scoring for the receptive V_YesNo test, developed by Meara (2015), was conducted according to the guidelines provided by Meara & Miralpeix (2016: 118-119). This test tracks two main types of responses: "Hits," where the participant correctly identifies real words, and "False Alarms," where they incorrectly mark imaginary words as real. The test was divided into six groups of 20 words, with each group consisting of 10 real words and 10 invented ones. For every group, the total number of hits (H), and false alarms (F), was calculated. A correction factor was applied to address the possibility of guesswork. This correction factor, A, was calculated using the formula:

$$A = 1 - \left(\frac{w(F)}{w(H)}\right)$$

where $w(F)$ and $w(H)$ are values derived from a logistic weighting function table (see table 6) based on the number of False Alarms (F) and Hits (H).

Table 6 Values to Determine w(F) and w(H)

x	0	1	2	3	4	5	6	7	8	9	10
$w(x)$	0	1	3	6	10	15	20	24	27	29	30

The final vocabulary size estimate, $Vsize$, is then calculated by multiplying the number of Hits by 100 and applying the correction factor using the formula:

$$Vsize = H \times 100 \times A$$

This approach penalizes incorrect YES responses more heavily for participants with fewer correct YES responses (Hits) while being more tolerant towards those with higher accuracy (Meara & Miralpeix 2016: 118-119).

7 Data Analysis

The following presents and analyzes the data from the questionnaire and the V_YesNo test. The first section presents descriptive statistics regarding students' media access and internet usage, examining various parameters in detail. This is followed by a descriptive analysis of EE activities, focusing on the most popular activities and the frequency of student participation.

Subsequently, the data collected from the questionnaire are correlated with vocabulary test scores, which are also described using descriptive statistics. Inferential statistical analyses were conducted to explore these relationships. Specifically, Spearman's rank-order correlation was used to assess the strength and direction of associations between variables, and the Mann-Whitney U test was applied to evaluate differences between groups. These non-parametric tests are particularly suitable given the ordinal nature of most of the data, as they do not assume equal intervals between data points or a specific distribution, making them ideal for analyzing ranked data (Cohen, Manion & Morrison 2018: 565).

Hypotheses and null hypotheses were formulated for each research question to investigate correlations. Null hypotheses, which propose no statistical correlation between the variables, were tested. The results either supported or rejected the null hypotheses. If a null hypothesis is rejected, the alternative hypothesis, which posits a correlation, is accepted (Cohen, Manion & Morrison 2018: 744). Key statistical measures such as the p-value, effect size, correlation coefficient, and U-value were calculated to determine statistical significance.

The p-value indicates the probability that the observed data would occur by random chance if the null hypothesis was true. The significance level, typically set at 0.05, serves as a threshold for rejecting the null hypothesis. A p-value below 0.05 suggests a less than 5% probability that the observed results occurred by random chance. This leads to rejecting the null hypothesis, indicating that the results are statistically significant. However, while a p-value below 0.05 indicates statistical significance, it does not provide information about the effect’s size or practical significance. Therefore, measures like effect size are often combined with p-value, as was the case for this study. (Cohen, Manion & Morrison 2018: 746).

Effect size is a crucial statistical measure that quantifies the magnitude of a difference or relationship independent of the sample size. Unlike the p-value, which only indicates whether

an effect exists, the effect size reveals the size of that effect. A commonly used measure of effect size is effect size r (Cohen, Manion & Morrison 2018: 745-746).

Effect size r is primarily used in correlation analysis, such as with Spearman's r_s for ranked data. It measures the strength and direction of the relationship between two variables. The value r ranges from -1 to +1, where values closer to -1 or +1 indicate a stronger relationship. The interpretation of r is generally categorized as follows (Cohen, Manion & Morrison 2018: 746):

small effect	$0 \leq r < 0.1$
modest effect	$0.1 \leq r < 0.3$
moderate effect	$0.3 \leq r < 0.5$
strong effect	$0.5 \leq r < 0.8$
very strong effect	$0.8 \leq r \leq 1$

The correlation coefficient r, used in correlation analysis, not only measures the strength and direction of a linear relationship between two variables but also serves as a measure of effect size in this context. (Cohen, Manion & Morrison 2018: 767, 746). This means that the value of r provides insight into both the correlation and the magnitude of the effect. Therefore, in correlation analyses, the correlation coefficient r is inherently interpreted as the effect size r, reflecting the degree of covariation between the variables. This dual role makes the correlation coefficient particularly useful for assessing how well one variable can predict another. A scatterplot can be used to visually explore the relationship between two variables, where each observation pair is represented by a dot, allowing for a visual assessment of the strength and nature of the relationship. The interpretation of the correlation coefficient is consistent with that of effect size r (2018: 768).

In the context of the Mann-Whitney U test, the U-value is used to compare differences between two independent samples. The test ranks all the values from both groups together and sums the ranks for each group. The U-value is crucial in determining whether one group tends to have larger values than the other. If the p-value associated with the U-statistic is below the significance level, the difference between the groups is considered statistically significant (Cohen, Manion & Morrison 2018: 794-795).

7.1 Access to Media and the Internet

The first part of the questionnaire collected data on students' access to media, which is essential to understanding their media consumption habits, particularly since many EE activities are conducted online. The findings indicate that all students surveyed possess a smartphone (100%). Additionally, a substantial majority own a computer or laptop (93.8%), with a higher percentage observed among HLS students (97.4%) compared to FSB students (90.2%). Concerning tablet ownership, more than two-thirds of the students (70%) reported owning one. When it comes to devices generally used at home, the participants used the radio (51.9%), the tablet or iPad (48.1%), the gaming console (37%), or the DVD player (22.2%). Comparing FSB and HLS classes, nearly half of the FSB students but only around 30% of the HLS students play with a gaming console.

Furthermore, all students have internet access at home (100%), and nearly all engage in daily internet use (98.8%). On average, students spend 5.6 hours online each day, with FSB students reporting higher daily usage (6.23 hours) compared to HLS students (4.90 hours). Most of the participants access the Internet with their phones, and the most frequently visited websites are TikTok, followed by Snapchat and Instagram.

The data suggests that students have extensive access to personal devices and the Internet and spend considerable time online daily.

7.2 Different Types and Amounts of EE Contact

This section presents the results of the data about EE activities and habits of the participants of the questionnaire and discusses the following research questions:

- RQ1a – What extramural English activities are the students engaged in?
- RQ1b – How much time do they spend on extramural English activities?

Descriptive statistics were applied to answer research question 1a. Figure 6 presents the frequency distribution of the EE activities across all classes. The y-axis lists the various EE activities; the x-axis represents frequency categories ranging from 1 (never/rarely) to 5 (daily). The colors represent the percentage of students engaging in each activity at each frequency level. Darker red indicates a higher percentage, while lighter colors (yellow to white) indicate a lower percentage. The results are shown as percentages to account for cases where some students did not report on certain activities.

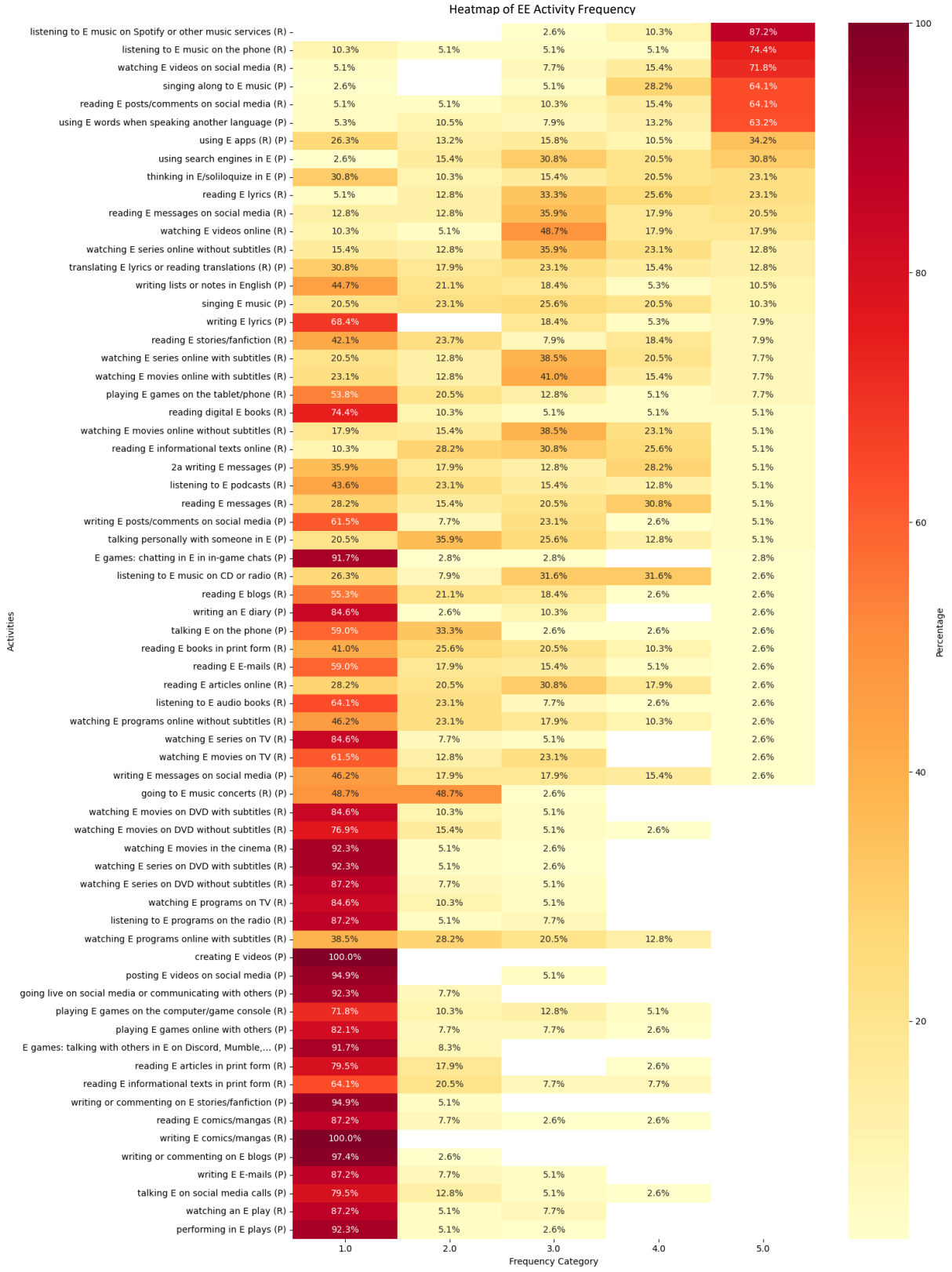

Figure 6 EE Activities and Their Frequency (n=81)

Regarding daily activities, the top two activities are closely related, both involving listening to English music. The most popular activity, listening to English music on Spotify, is engaged in by a significant 87.2% of students. Following closely, 74.4% of students prefer listening to

English music on their phones. These figures indicate a strong preference for consuming English music through digital platforms among the student population. Listening to English music is followed by 71.8% of students who watch English videos on social media. Additionally, 64.1% of participants sing along to English music, as well as read English comments or posts on social media. Another common activity is using English words when speaking in another language, with 63.2% of participants engaging in this practice.

When examining weekly, monthly, and yearly activities, no single activity stands out as a predominant practice. The highest weekly engagement rate observed is 31.6% for listening to English music on CD or the radio, which suggests that traditional formats still play a role in how to consume music. Moreover, nearly 30.8% engage weekly in reading messages in English.

Regarding monthly EE activities, the most common practices include watching online video content. The highest-ranked activity is watching videos in English online (48.7%), followed by streaming English movies with subtitles (41%), streaming English movies without subtitles (38.5%), and streaming English TV series without subtitles (38.5%).

On a yearly basis, 48.7% of students go to English concerts, and 35.9% of students speak to someone personally or on the phone in English during their free time (33.3%).

When looking at the lowest frequency level (never/rarely), several activities dominate. The top activities that participants engage in the least include writing their own comics (100%), creating their own English videos (100%), writing or commenting on blogs in English (97.4%), posting their own English videos on social media (94.9%), writing or commenting on stories/fanfiction in English (94.7%), playing English theater (92.3%), or going live on social media and communicating with others in English (91.3%).

The data illustrates a clear distinction in engagement levels between different types of EE activities, with receptive activities – such as listening to music, watching videos, and reading content – being performed significantly more frequently than productive activities like creating content or performing in English. The highest engagement levels are associated with activities that involve consuming English content, particularly those that require less active production, such as listening to music or watching videos on social media. In contrast, productive activities, especially those requiring creative output, are far less common, with many participants never or rarely engaging in them. This suggests that while many participants

frequently encounter English through activities that involve listening or reading, there is a noticeable hesitation or lower tendency to participate in activities that require them to produce or use English actively.

Furthermore, the engagement level of the participants spent on EE activities is of interest. Figure 7 illustrates the distribution of daily and weekly activities, showing how many students engage in varying numbers of activities. The blue columns represent daily activities, while the orange columns correspond to weekly activities. The brown columns indicate the overlap between these two categories, where the activities are counted as both daily and weekly.

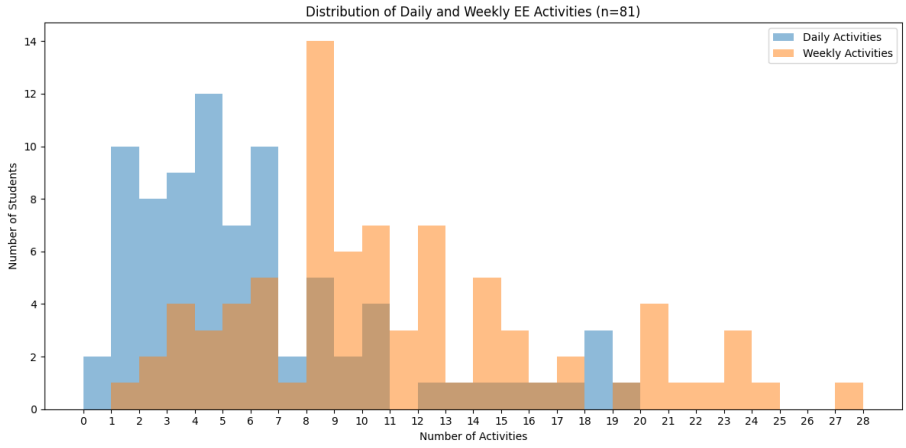

Figure 7 Distribution of Daily and Weekly EE Activities

Nearly all participants (79 out of 81) engage in daily EE practices, with a median of five activities per day. Every participant spends time on EE activities outside of school every week, with a median engagement in ten activities per week. However, there is considerable variation among the participants. While two students reported no daily EE activities, others engaged in as many as 19 activities per day. Similarly, in the context of weekly activities, one participant engaged in only one activity, whereas the maximum reported was 27 activities. No participant was completely inactive and did not engage in any activity.

In conclusion, the research reveals that students primarily engage in receptive EE activities, such as listening to music and watching videos, with digital platforms being the most popular mediums. Productive activities requiring active language use are far less common. Nearly all participants engage in daily activities with a median of 5 and weekly activities with a median of 10, indicating considerable engagement in EE activities.

7.3 EE and Receptive Vocabulary Breadth

This section analyzes the relationship between EE practices and receptive vocabulary breadth and provides answers to the second research question.

- RQ2a – What is the correlation between EE activities and students' receptive vocabulary breadth?

The students' EE habits were presented in the previous chapter. To establish a connection with the participants' receptive vocabulary breadth, the main results of the V_YesNo test are first summarized. One participant's test had to be excluded from the analysis due to being incomplete, reducing the sample size from 81 to 80.

The lowest V_YesNo score was 1,100, and the highest was 7,905. The median score was 3,973.50, and the mean score was 4,044.69. According to Meara and Miralpeix (2016: 118), the test scores are categorized into proficiency levels as follows:

Table 7 V_YesNo Scores and Proficiency Level

Below 2,500	Beginners
2,500 – 4,500	Intermediate-level learners
4,500 – 7,500	Learners with a good level of competence
7,500 – 9,000	High-level proficient learners
Over 9,000	Educated native speaker/very high-level proficient and fluent learners

Based on this classification, the lowest score (1,100) falls into the beginner category. However, it should be noted that this score is unreliable (Meara & Miralpeix 2016: 118) as the test is designed to better assess individuals with a higher level of vocabulary knowledge (2016:115).

The participant who achieved the highest score of 7,905 is classified as a high-level proficient learner. The mean score of 4,044.69 and the median score of 3,973.50 indicate that the majority of participants are at the intermediate level of proficiency.

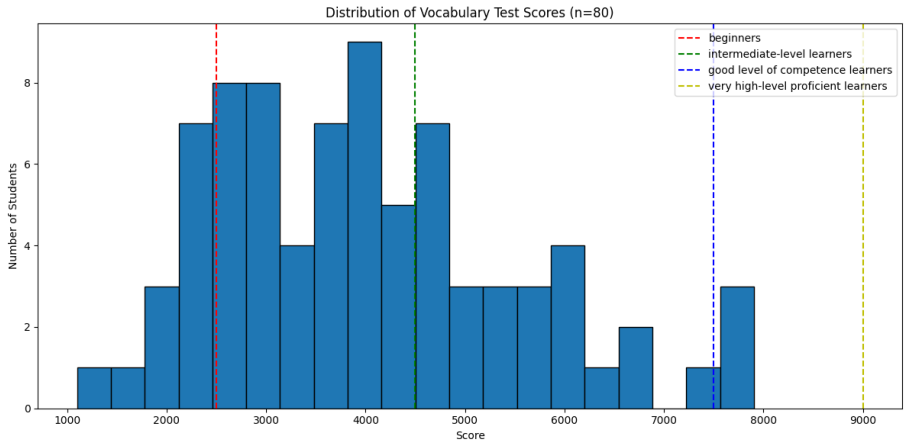

Figure 8 Distribution of V_YesNo Scores

Figure 8 illustrates the distribution of participants across the various proficiency levels. The research group consists of 13 beginners, 39 intermediate-level learners, 25 learners with a good level of competence, and 3 with a very high proficiency.

Moreover, it was of interest if the HLS and FSB groups differed in their vocabulary test scores. Therefore, a Mann-Whitney U test was conducted to determine statistically significant differences. Figure 9 illustrates this.

Figure 9 V_YesNo Differences in FSB (n=41) and HLS (n=39)

The results indicate a statistically significant difference between the two school types ($p = 0.0001$). However, the effect size is small ($r = 0.0512$). This suggests that even though there is a significant difference, the impact of it is only mediocre.

H2.1: The level of EE engagement positively correlates with learners' receptive vocabulary breadth.

To be able to reject or support this hypothesis, a null hypothesis was formulated: The level of EE engagement does not correlate with learners' receptive vocabulary breadth. Moreover, a general EE activity score for each participant was calculated representing the mean engagement level in EE activities. With the help of Spearman's rank-order test, the relationship between the general EE activity scores and the vocabulary test scores was assessed.

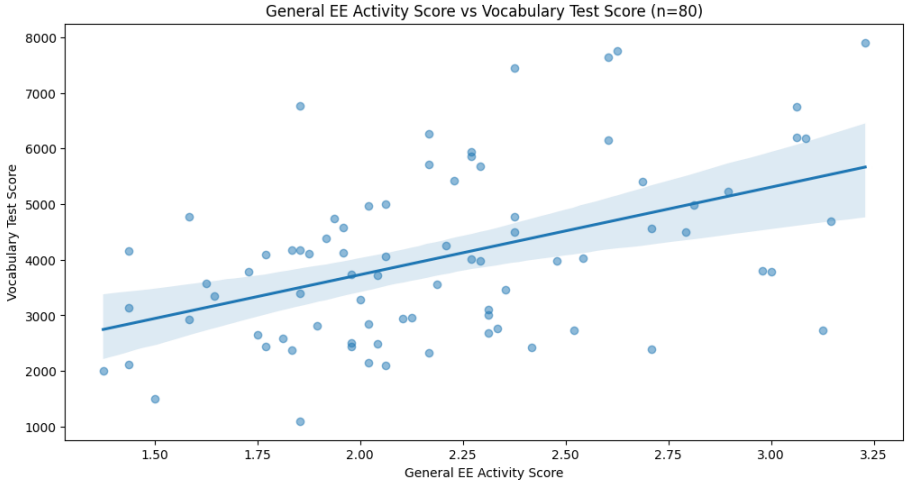

Figure 10 Relations between EE Score and V_Yes/No Score

Figure 10 shows a scatter plot with a positive correlation between the general EE activity score and the vocabulary test score. The correlation coefficient is 0.418, indicating a moderate positive relationship. The p-value of 0.0001 is below the 0.05 significance level, leading to the rejection of the null hypothesis. The data supports the alternative hypothesis, meaning the level of EE engagement moderately correlates with receptive vocabulary breadth.

To determine if the differences in vocabulary scores between students with low and high EE activity are statistically significant, a Mann-Whitney U test was performed. Participants were divided into two groups based on their general EE activity scores: those below the median formed the 'Low EE' group, and those above the median constituted the 'High EE' group.

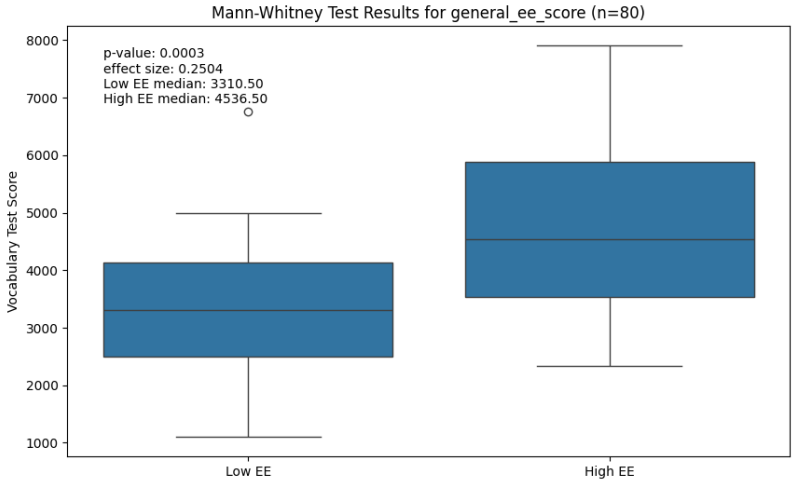

Figure 11 Vocabulary Test Scores in Low and High EE Groups

Figure 11 displays the distribution of vocabulary test scores for the Low EE and High EE groups. It is indicated that the High EE group has a higher median vocabulary score (4,5360.50) than the Low EE group (3,310.50), suggesting a positive impact of higher EE activity on vocabulary acquisition. The Mann-Whitney U test yielded a U-statistic of 420.5, with a p-value of 0.0003, which is well below the 0.05 significance level. This indicates that the difference in vocabulary scores between the two groups is statistically significant. The effect size (r), which was calculated to be 0.2504, reflects a small to moderate effect of EE activity on vocabulary scores.

H2.2: The amount of time spent on EE activities during Easter break positively correlates with students' receptive vocabulary breadth.

For comparison, the time spent on EE activities during the Easter break was analyzed. This analysis offers an additional measure of EE engagement, and if the results align with those found in H2.1, it will further substantiate the correlation between EE engagement and enhanced vocabulary breadth.

Due to incomplete data, six participant results had to be excluded from the analysis, reducing the sample size from 81 to 75. Afterward, the following null hypothesis was formulated: There is no correlation between the amount of time spent on EE activities during the Easter break and students' receptive vocabulary breadth. To be able to reject or support the null hypothesis a Spearman's rank-order test was performed. The results can be seen in figure 12.

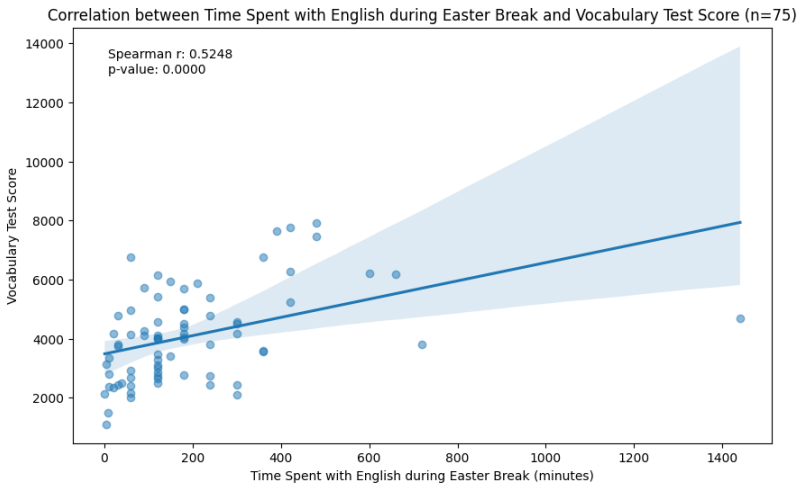

Figure 12 Correlation Between Time Spent with EE during Easter Break and V_Yes/No Score

The Spearman's rank-order correlation indicates a moderate positive correlation ($r = 0.5248$) between time spent with English and vocabulary test scores. The highly significant p-value ($p = 0.0000$) supports the rejection of the null hypothesis, confirming that increased time spent with English correlates with higher vocabulary test scores. It is important to note that the variable representing time spent on English activities during the Easter break is based on students' self-reported data. While this may not capture the exact time spent, it still provides an approximate measure of engagement. Students who dedicate more time to English activities are likely to report a higher number of minutes, even if the precise figures may vary. Thus, despite potential inaccuracies, the overall trend remains meaningful. The reported data reflects a general pattern of engagement, which is valuable for understanding the relationship between time spent and vocabulary knowledge.

A Mann-Whitney U test was conducted, comparing two groups formed based on proficiency levels. The groups were created by dividing students at the median vocabulary score: students with scores below the median were categorized as ‘Low Proficiency,’ while those with scores above the median were classified as ‘High Proficiency.’

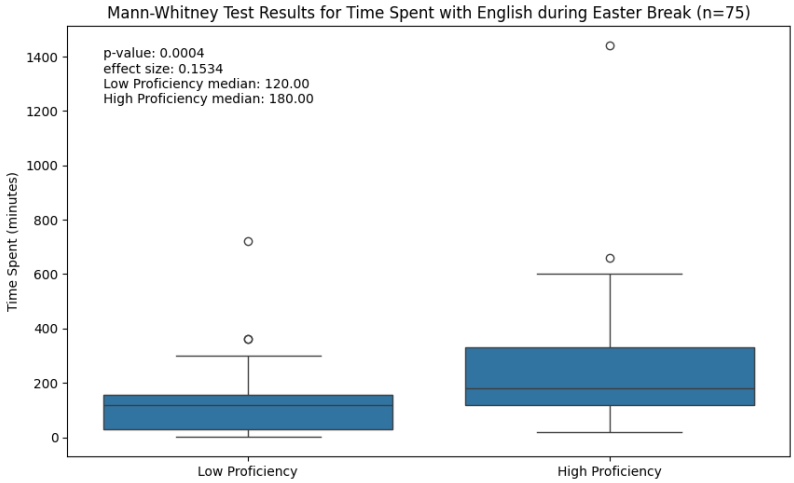

Figure 13 Time spent with English during Easter Break in Low and High Proficiency Groups

The test results (see figure 13) reveal a statistically significant difference ($p = 0.0004$) in the median time spent with English between the Low Proficiency group (120 minutes) and the High Proficiency group (180 minutes). In addition to the significant p-value, the effect size ($r = 0.1534$) suggests a modest impact of this difference.

H2.3: The level of productive EE engagement correlates more strongly with receptive vocabulary breadth than receptive EE engagement.

According to the *Output Hypothesis* (Swain 1985), producing language is an important factor in language learning because it helps learners test their hypotheses about the language and notice gaps in their knowledge (Swain 2005: 471). Schmidt's Noticing Hypothesis (1990, 1994, 2001) further emphasizes that the act of noticing a word and paying attention to it increases the likelihood of learning it (Schmidt 1994: 17). These theories suggest that L2 production plays a significant role in language learning, making it essential to compare the correlations of receptive and productive EE engagement with receptive vocabulary breadth.

The following null hypothesis was formulated to investigate this: The level of productive EE engagement does not correlate more strongly with receptive vocabulary breadth than receptive EE engagement. Participants' general productive and receptive EE activity scores were calculated and used as variables in Spearman's rank-order tests. The dependent variable was receptive vocabulary breadth. Figure 14 illustrates the correlations between both types of EE engagement and receptive vocabulary breadth.

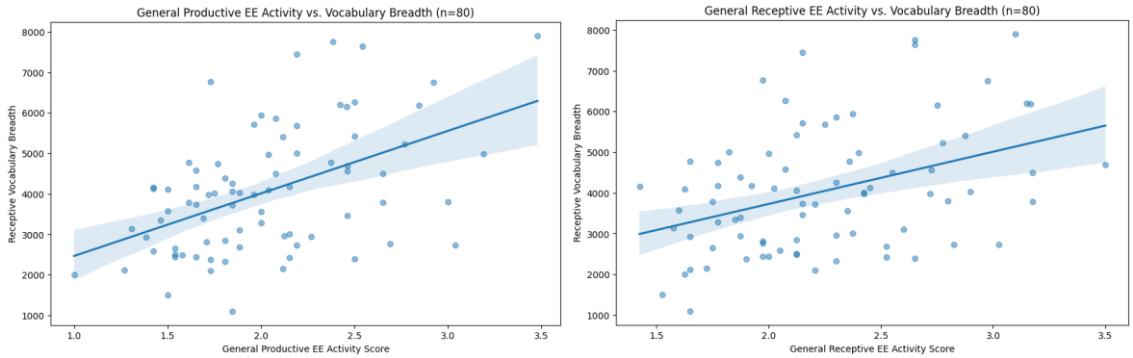

Figure 14 Correlation between Productive/Receptive EE Activities and Receptive Vocabulary Breadth

The Spearman correlation coefficients indicate a moderate positive correlation for both types of activities. However, productive EE engagement shows a slightly stronger correlation ($r = 0.4618$) with receptive vocabulary breadth than receptive EE engagement ($r = 0.3641$). The p-values of 0.0000 for productive EE engagement and 0.0009 for receptive EE engagement confirm that these correlations are highly statistically significant. Consequently, the null hypothesis is rejected in favor of the alternative hypothesis.

A Mann-Whitney U test was performed to substantiate these results further. Participants were divided into two groups based on their productive and receptive EE engagement levels, with scores below the median grouped as 'Low Activity' and scores above the median as 'High Activity.' Figure 15 presents the outcomes of these tests.

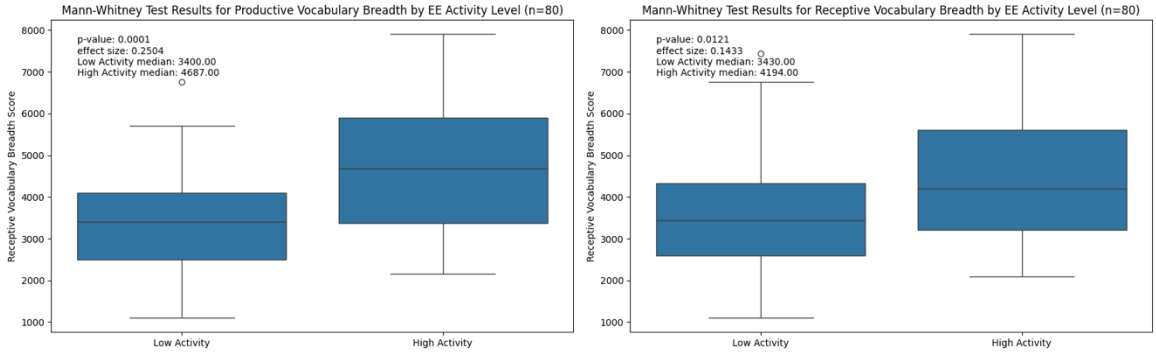

Figure 15 V_Yes/No Scores in Low and High Productive/Receptive EE Groups

The Mann-Whitney U tests reveal that both productive and receptive EE engagements have modest effect sizes. However, the effect size for productive EE engagement ($r = 0.2504$) is slightly larger than that for receptive EE engagement ($r = 0.1433$). Additionally, the p-values for both tests indicate high statistical significance, with the p-value for productive EE engagement ($p = 0.0001$) being lower than that for receptive EE engagement ($p = 0.0121$).

The median scores for the High-Activity groups further substantiate these findings: 4,687 for productive and 4,194 for receptive engagement.

Notably, the median of the receptive Low-Activity group (3,430) is slightly higher than that of the productive Low-Activity group (3,400). This suggests that low engagement in productive EE is not more significant than in receptive EE. However, at higher levels of engagement, productive EE correlates more strongly with receptive vocabulary breadth than receptive EE.

In conclusion, the findings suggest a positive correlation between time spent on EE activities and higher vocabulary test scores among HLS and FSB students. Specifically, productive EE activities show a stronger correlation with vocabulary breadth than receptive activities. This implies that students who actively engage in more productive EE practices are likely to achieve higher vocabulary test scores.

- RQ2b – In what ways does the EE engagement of students with high and low receptive vocabulary knowledge differ?

It has already been established that higher EE engagement correlates with a greater receptive vocabulary breadth. A further investigation into whether the specific EE activities differ between higher and lower-proficiency learners provides additional insight. For this analysis, the vocabulary test scores were again used to divide the participants into two groups using the median score as a cutoff point: 'High Proficiency' and 'Low Proficiency'. The mean engagement score for each EE activity was compared between the two groups by calculating the difference in means.

Mann-Whitney U tests were performed for each activity to determine whether these differences in engagement between the two groups were statistically significant. For activities where the differences were significant ($p < 0.05$), the effect size (r) was calculated to quantify the magnitude of these differences. Table 8 presents the top five activities with the most substantial engagement differences.

Table 8 Difference in EE Engagement between High and Low Proficiency Groups (n=80)

activities	statistic	p-value	effect size r	low proficiency mean	high proficiency mean
using search engines in E	1,181.00	0.0002	0.1416	2.95	4.00
reading E books in print form	1,102.50	0.0015	0.1265	1.70	2.52
reading E articles online	1,049.00	0.0129	0.1263	2.02	2.67
writing lists or notes in English	1,088.00	0.0014	0.0988	1.60	2.44
watching E programs online without subtitles	1,096.00	0.0024	0.0999	1.70	2.52

Table 8 is ranked by effect size to emphasize activities where the differences between proficiency groups are most impactful. While the p-value indicates whether the difference between groups is statistically significant, it does not inform how large or important that difference is. Therefore, even though reading articles in English online has a lower p-value and is statistically more significant than reading printed books in English, it is ranked after reading printed books due to its lower effect size.

Among the top three activities with the most substantial differences—using search engines in English, reading English books in print, and reading English articles online—modest effect sizes were observed. The first activity, using search engines in English, requires language production, which has been established as beneficial for receptive vocabulary breadth (cf. H2.3). The second activity, reading English books in print, falls under the category of extensive reading, a practice known for its significant benefits to language learning (Horst 2005; Webb & Chang 2015; Chang & Hu 2018; cf. chapter 5.1). The third activity, reading English articles online, also involves reading, an activity that demands greater cognitive effort and is, therefore, often avoided by learners with lower proficiency (Sundqvist, 2009).

For higher proficiency learners, engaging in reading activities is likely less strenuous due to their broader vocabulary knowledge, which enables them to comprehend more of the text with relative ease. This suggests a dual role of reading in language development: while it is a crucial activity for vocabulary growth, it is likely to be more accessible and less effortful for learners who already possess a higher level of vocabulary knowledge. Consequently, higher proficiency learners may be more inclined to engage in reading activities, which in turn further enhances their vocabulary breadth.

7.4 Social Status and its Correlations

- RQ3a – In what ways do the socioeconomic background of the FSB and HLS students differ?

In order to find answers to RQ3a, the variable social status (s) expressing socioeconomic background was calculated using three parameters: HISEI[1], parental education, and book code (cf. chapter 6.5). The distribution of social status was then analyzed for FSB and HLS students. However, due to incomplete data, 6 participant results had to be excluded from the analysis, reducing the sample size from 81 to 75. Although both school types include students from lower ($FSBmin = -1.606600$; $HLSmin = -1.231200$) and higher social statuses ($FSBmax = 1.919000$; $HLSmax = 2.188400$), the data indicates that, on average, HLS students have a higher socioeconomic background[2]. The mean social status score for FSB participants was -0.440990, while for HLS participants, it was 0.557711. Figure 16 presents the social status distribution between these two groups, illustrating the observed differences.

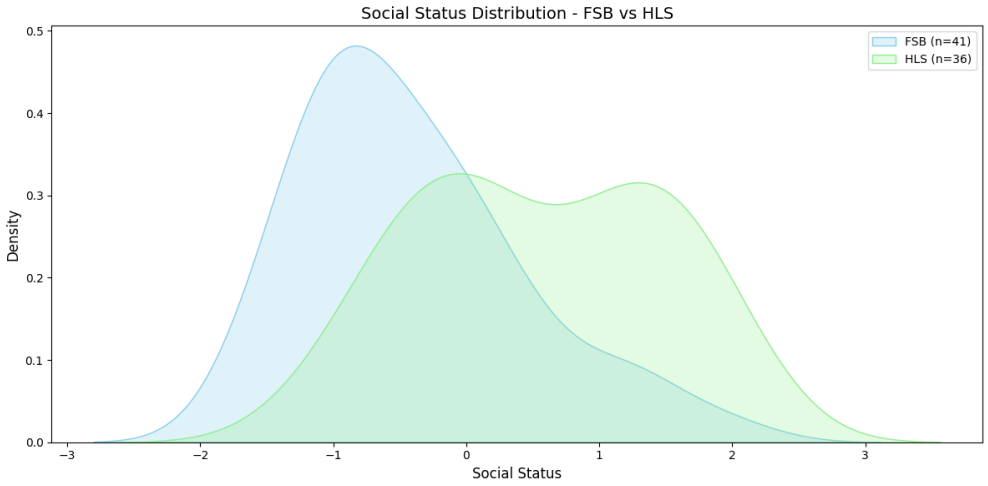

Figure 16 Social Status Distribution of FSB and HLS students

Since the data is not normally distributed, the Mann-Whitney U test was performed to determine whether there was a statistically significant difference between FSB and HLS. Figure 17 illustrates the results.

[1] Highest International Socio-Economic Index

[2]Social status (s) ranges from a minimum value of -2.2938 to a maximum value of 2.3292.

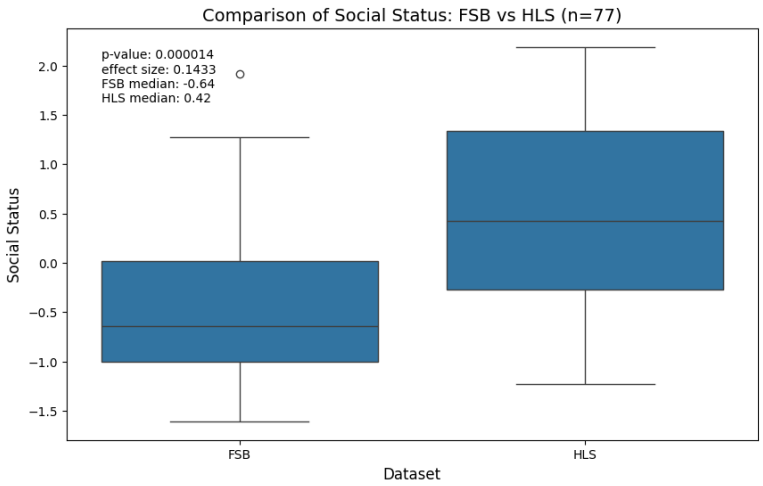

Figure 17 Comparison of Social Status of FSB (n=39) and HLS (n=36) students

The median social status notably differs between FSB and HLS, as depicted in figure 17. With a p-value of 0.000014, the difference in social status between these two groups is highly statistically significant. The effect size ($r = 0.1433$) suggests a modest practical impact of this difference.

- RQ3b – How does the socioeconomic background correlate with the EE engagement of the participants?

H3b.1: Socioeconomic background correlates with the level of EE engagement of participants.

To be able to reject or support this, the following null hypothesis was formulated: There is no correlation between socioeconomic background and EE engagement. The socioeconomic background was expressed by the social status for the analysis. The mean EE engagement of the students was expressed through the general EE activity score. With the help of Spearman's rank-order test, the relationship between the general EE activity scores and the social status was assessed. Due to the p-value being above the significant level of 0.05, the alternative hypothesis was rejected. This is supported by the results of the Mann-Whitney U test, which tested the difference in EE engagement between High and Low Social Status groups. Therefore, socioeconomic background does not correlate with the level of EE engagement of the students in this study.

- RQ3c – How does the socioeconomic background correlate with the receptive vocabulary breadth of the participants?

H3c.1: Socioeconomic background correlates with the receptive vocabulary breadth of participants.

Due to incomplete data, five participant results had to be excluded from the analysis, reducing the sample size from 81 to 76. Then, the following null hypothesis was formulated: There is no correlation between socioeconomic background and receptive vocabulary breadth. The students' socioeconomic background was also expressed by their calculated social status. A Spearman's rank-order test was performed to explore the relationship between vocabulary test scores and social background.

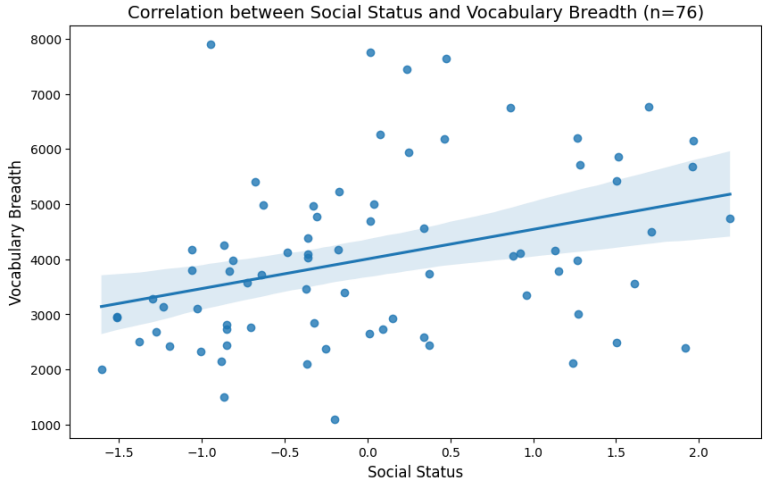

Figure 18 Correlation between Social Status and V_Yes/No

The correlation coefficient of 0.3870 suggests a moderate correlation between social status and vocabulary test scores, which is depicted in figure 18. Moreover, this correlation is statistically significant, as indicated by the low p-value of 0.0006. These results reject the null hypothesis and support the alternative hypothesis, meaning social status moderately correlates with receptive vocabulary breadth.

In order to perform the Mann-Whitney U test, the participants were divided into two groups based on their social status score. Students' scores below the median social status were grouped as 'Low Social Status,' and those above the median were classified as 'High Social Status.' The differences between these two groups are illustrated in figure 19.

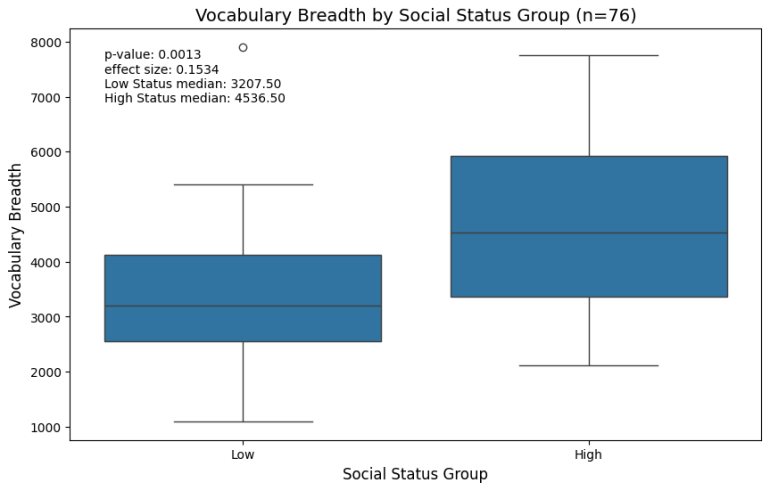

Figure 19 Differences in V_Yes/No Scores between Low and High Social Status Groups

The median vocabulary test score for the High Social Status group (4,536.50) is higher than that of the Low Social Status group (3,207.50), indicating that participants with higher social status generally have a larger receptive vocabulary breadth. The difference in receptive vocabulary breadth is statistically significant ($p = 0.0013$). Moreover, the effect size ($r = 0.1534$) indicates that the magnitude of the difference between Low and High Social Status groups is modest.

In conclusion, the analysis suggests a statistically significant difference in the social status of HLS and FSB students, with HLS students having, on average, a higher social status than FSB students. Moreover, no statistically significant correlation was detected between EE engagement and socioeconomic background. However, a correlation was found between social status and receptive vocabulary breadth. The Spearman correlation indicates a moderate positive relationship, and the Mann-Whitney U test confirms that the difference in vocabulary breadth between the High and Low Social Status groups is statistically significant.

7.5 Comparison of FSB and HLS Students

- RQ4 – What are the differences or similarities between EE engagement of FSB and HLS students?

Several aspects were analyzed to answer this research question: the amount of daily and weekly EE activities, the average EE engagement level, the average productive EE engagement level, and differences in activities.

Beginning with the daily amount of EE, HLS students' median is four activities. FSB students, on the other hand, have a median of 5, meaning they engage in slightly more daily activities.

The highest amount of daily EE activities in HLS and FSB students is 18, done by one HLS and two FSB students. Both groups have one student who is not engaging in any daily EE activities. With regards to weekly engagement, HLS students' median is 10 activities per week. The median of FSB is similar, with a median of 9.5 activities per week. The highest weekly EE engagement of HLS students is 24 activities done by one participant. This is exceeded by one FSB student who engages in 27 weekly activities. The lowest weekly engagement is one activity for HLS participants and two activities for FSB students.

FSB students, therefore, engage slightly more in daily activities. However, HLS students slightly exceed FSB students in weekly engagement, even though the highest amount of weekly EE engagement is done by an FSB student.

A Mann-Whitney test was performed to determine significant differences in general and productive EE engagement between these two school types. The test was run with the general EE activity score and a general productive EE activity score calculated for each student to obtain an overall impression. The results can be seen in figure 20.

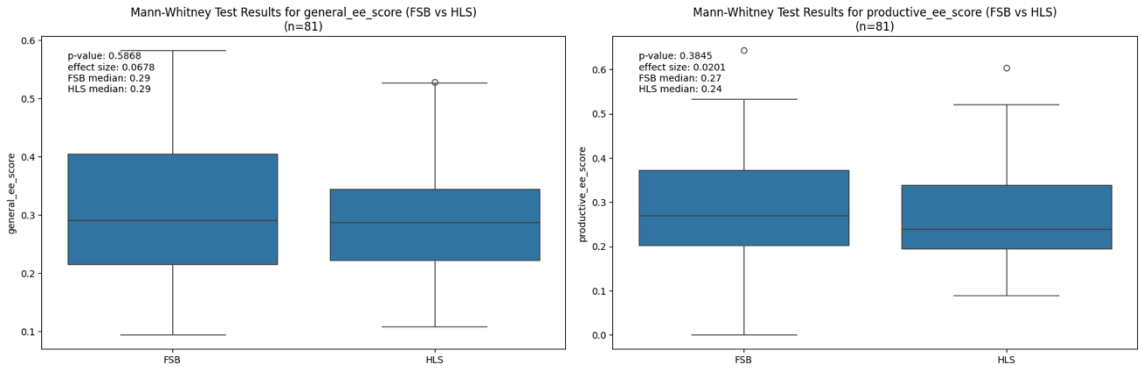

Figure 20 Differences in General and Productive EE Engagement between FSB (n=42) and HLS (n=39)

No statistical significance was revealed when performing Mann-Whitney tests with general EE activity scores (p=0.5868) and productive EE activity scores (p=0.3845). Therefore, it can be said that there are no major differences between HLS and FSB students in their daily and weekly EE activities and no significant differences in their general and productive EE engagement.

Additionally, the differences in engagement between HLS and FSB were analyzed. For that purpose, the general EE activity score of every activity for both groups was calculated. A Mann-Whitney U test was performed for each activity to explore if there were statistically significant differences between the mean scores. Table 9 ranks the results according to effect size. The

activities in which HLS engaged more often on average are listed first, followed by the ones of FSB.

Table 9 Differences in EE activities between HLS (n=39) and FSB (n=42)

	activities	U statistic	p-value	Effect size r	FSB mean	HLS mean
HLS	using English words when speaking another language	530.50	0.0040	0.303	3.45	4.23
	reading informational texts in English online	581.00	0.0203	0.2500	2.26	2.87
	reading books in English in print	603.50	0.0267	0.2263	1.57	2.08
FSB	watching series in English on DVD with subtitles	1057.00	0.0009	0.2771	1.68	1.10
	writing messages in English on social media	1040.50	0.0166	0.2594	2.88	2.10
	writing posts/comments in English on social media	1057.50	0.0152	0.2505	2.62	1.82
	watching movies in English on DVD with subtitles	1046.50	0.0068	0.2389	1.76	1.21
	talking English on social media calls	1019.00	0.0224	0.2100	1.86	1.31

The activity that exhibits the largest effect size is the use of English words while speaking another language, with HLS students engaging in this practice more frequently. The mean score for HLS students suggests that this activity is practiced on a weekly to daily basis. In contrast, other activities, based on their mean scores, are not performed regularly.

Overall, HLS students are more inclined to engage in activities that involve reading extended texts in English, such as reading informational texts online or reading books in print. On the other hand, FSB students tend to participate more frequently in activities related to entertainment and social media, such as watching English-language series and movies with subtitles or writing and posting in English on social media platforms.

It is important to note that both HLS and FSB students engage in both receptive (e.g., watching and reading) and productive (e.g., writing and speaking) activities. This suggests that the difference between the two groups cannot be categorized solely based on the type of

language activities they prefer. This aligns with the findings above (no statistically significant difference in productive EE engagement between HLS and FSB). Even though FSB students engage more frequently in a larger number of activities, some of these activities are similar in nature. For example, watching series in English and watching movies in English, as well as writing messages in English and writing posts/comments in English, are activities that share substantial similarities and could be combined.

In summary, the data suggests that although FSB students are more active in certain English language activities, the nature of these activities often overlaps, particularly in the context of entertainment and social media. On the contrary, HLS students appear to focus more on activities that involve more sustained reading in English. However, it is important to note that FSB and HLS students do not statistically significantly differ in their general level of EE engagement, nor do they differ significantly in their productive EE engagement. This indicates that while the specific activities may vary between the two groups, their overall engagement remains comparable.

8 Discussion

This chapter deals with the interpretation of the results and compares it with other research. It is important to mention that the studies used for drawing comparisons often used other instruments for testing or focused on specific aspects of learning. Therefore, they should not be directly compared but used as additional insight gained.

Descriptively analyzing the general EE engagement showed that nearly all participants engage in English every day (98%), and all get in contact with English every week (100%). The most daily engaged activity is listening to English music on Spotify (87.2%) or on their phone (74.4%), followed by watching English videos on social media (71.8%), singing along to English music (64.1%) and reading English comments/posts on social media (64.1%). Listening to English music is the most popular activity, which aligns with the results of Krüger (2023), Berns, de Bot, and Hasebrink (2007), and Sundqvist (2009). However, Berns, de Bot, and Hasebrink's (2007) participants primarily listened to music via radio, whereas students in this study favored platforms such as Spotify and other digital music services. Although Spotify was founded in 2006, its reach and functionality have expanded considerably over time. Today, it has 615 million monthly active users (Spotify 2024). This number emphasizes the popularity of this music service. The possibility to access various songs and the free choice of what to listen to speak for its major appeal. However, while music listening is a popular activity, it may have limited benefits for vocabulary acquisition, as argued in chapter 5.7. Akbary, Shahriari & Fatemi (2018: 352) suggest that learners must focus on form for this activity to be advantageous. The *Depth of Processing Hypothesis* (Schmitt 1995) and the *Involvement Load Hypothesis* (Hulstijn & Laufer 2001) support this argument.

As Sundqvist's (2009) and Berns, de Bot, and Hasebrink's (2007) studies were conducted over a decade ago, it is unsurprising that they do not include activities such as watching English videos on social media or reading English comments and posts in their rankings. Sundqivst (2009) ranked surfing the Internet in fifth place, already marking its importance. However, the importance of the Internet has grown since then, as have the hours spent on social media (cf. 3.4). Therefore, it is logical that, in this study, social media usage ranks in second and third place. Krüger (2023: 115) ranks browsing English-language websites and watching videos in English online as second place in her study as well. The preferred website students spent their time on was YouTube, followed by social media (Krüger 2023: 115). This aligns with the results

of this study because participants also mention TikTok and Instagram as one of their favorite websites when surfing online. Berns, de Bot, and Hasebrink (2007), on the other hand, ranked watching TV as their second most popular EE activity. Given that social media platforms like YouTube, TikTok, and Instagram primarily feature videos or short reels, one could argue that these platforms represent a modern version of traditional television viewing. Therefore, younger audiences abandon traditional TV in favor of platforms like TikTok (Vázquez-Herrero, Negreira-Rey & Rodríguez-Vázquez 2021: 1).

Lee (2022: 15-16) provided a reason for the popularity of social media, describing it as an IDLE activity and highlighting its accessibility. The increased availability of English content on the Internet enables learners to engage with the language anytime and anywhere (2022: 19-20). Another advantageous aspect of an IDLE activity and, therefore, of social media is the autonomy it provides. Learners decide for themselves what to engage in, which then increases motivation. This intrinsic motivation is what drives learners to spend significant time online (2022: 20-21). Additionally, social media platforms offer audio, video, and text, thus being multimodal (2022: 23). These factors not only make social media a compelling activity to engage in but also support incidental vocabulary learning (2022: 23).

Regarding the amount of EE activities, participants in this study engage in a median of five activities per day and ten activities per week. The highest engagement per day is 19 activities, and per week, 27 activities. Berns, de Bot, and Hasebrink (2007) did not report a median EE engagement score, limiting direct comparison. Similarly, Sundqvist's (2009: 116) study measured EE engagement in terms of time, not activity count, reporting a median of 15.9 hours per week, which equates to approximately 2.27 hours per day. Interestingly, as discussed in chapter 3.4, teenagers and young adults currently spend around 2.7 hours per day on social media. Given that social media ranks second and third in engagement frequency among EE activities in this study, it suggests that a significant portion of this time is likely spent interacting with English content. Although not all social media content is in English, the widespread use of English on these platforms (Lee 2022: 19; cf. chapter 3.4) indicates that a substantial portion of this daily social media usage could be considered English engagement. Thus, while the measurements differ slightly, Sundqvist's median of 2.27 hours closely aligns with this study's findings regarding daily engagement with English. Hahn (2017: 80), on the other hand, reported a similar median of five daily activities but a slightly higher weekly

median of 13 activities. In conclusion, this study and others highlight that teenagers engage in a significant number of English activities.

After presenting the descriptive data on EE engagement, the following paragraphs discuss the correlations between EE activities and receptive vocabulary breadth. The vocabulary test scores indicate that most students are at the intermediate level of proficiency. Meara and Miralpeix (2016: 118) do not categorize test scores based on CEFR levels, which limits direct comparison with the CEFR levels of students' English coursebooks (A2-B1+; cf. chapter 6.2). However, according to the British Council (n.d.), CEFR level A2 is classified as pre-intermediate, while B1 corresponds to intermediate. This comparison implies that the intermediate level in the V_YesNo test could align with B1. The average vocabulary score appears appropriate, as the second graders are approaching B1, and the third graders are already at B1, according to their coursebooks. This suggests that some students may even exceed the expected A2/B1 level.

Analyzing the V_YesNo scores regarding EE engagement revealed a positive, moderate correlation between these two variables. Students who, on average, practice more EE activities have a higher receptive vocabulary breadth. Furthermore, participants' engagement with EE activities during the Easter break was examined. It should be noted that the data on students' engagement with English during the Easter break is based on self-reported measures. These self-reported figures should be interpreted with caution. Self-reporting is subject to potential biases, such as inaccuracies in recall or the tendency to overestimate or underestimate time spent on activities. Despite these limitations, the data remains noteworthy as it reflects students' awareness of their English exposure and highlights individual differences in engagement. These results also indicate a positive, moderate correlation, suggesting that students who spent more time with EE activities during their Easter break scored significantly higher on their vocabulary test than those with lower levels of engagement.

Similar findings have been reported in previous studies. Sundqvist (2009: 151), Hahn (2017: 82), and Schwarz (2020: 236) all identified a correlation between the amount of EE engagement and receptive vocabulary size. Krüger (2023: 163), with a broader focus on listening, reading, and writing skills, also found positive correlations between EE activities and language competence. Given that vocabulary is a fundamental component of listening, reading, and writing abilities (Nation 2013: 218), Krüger's findings can be extended to suggest

a positive impact on vocabulary acquisition as well. Collectively, these studies indicate that learners with higher EE engagement generally demonstrate greater vocabulary breadth. However, it is important to clarify that increased EE engagement does not necessarily lead to greater vocabulary knowledge, as also observed by Berns, de Bot, and Hasebrink (2007: 109).

An analysis of the differential impacts of receptive and productive EE engagement reveals a stronger correlation between productive EE activities and receptive vocabulary breadth. Sundqvist (2009: 203-204) did not categorize between receptive and productive but between passive and active/productive engagement. Activities that require more learner involvement, such as reading a book, playing a video game, or writing a story, are classified as active or productive. Although her categorization differs from this study, a comparison is still informative. Sundqvist's active/productive category includes productive EE engagement, allowing a meaningful discussion of the findings. She also observed that active or productive activities positively influence oral proficiency and vocabulary knowledge. These results are supported by the Interaction and Noticing Hypotheses (2009: 203).

Additional evidence in favor of productive engagement is provided by Schwarz (2020: 309), whose interviews indicated that learners perceive productive language use as highly beneficial for learning. Interestingly, interviewees also identified reading as beneficial, aligning with Sundqvist's (2009) classification of reading as an active or productive activity. Hahn (2017: 84), on the other hand, did not find significant differences between the effects of receptive and productive activities. In general, this study, as well as Sundqivst's (2009) and Schwarz's (2020), support the idea of productive engagement being more beneficial for vocabulary learning than receptive engagement. Productive language use needs more active attention, and learners need to focus on correctly using vocabulary and grammar. In conversations, they often need to negotiate meaning and may receive feedback on their output. These processes lead to language acquisition as supported in the Interaction Hypothesis (Long 1981, 1983a, 1983b) and Output Hypothesis (Swain 1985) (cf. chapter 4.1).

When exploring the difference in EE engagement of high- and low-proficient groups, using search engines in English, reading books in English, and reading articles online were activities that high-proficient students engaged in more often. These activities would fall into the category active/productive of Sundqvist (2009: 203), which was mentioned above. She indicated they are more important to vocabulary knowledge than passive activities (2009:

203). This information aligns with my findings that high-proficient learners engage in more active/productive activities.

This study and the other presented research support a positive correlation between EE activities and learners' vocabulary breadth. Detecting causation exceeds the possibilities of this study. However, the literature review provides evidence that EE engagement enhances vocabulary knowledge (cf. chapter 5). It is still necessary to keep in mind that language learning is not only influenced by one factor. Berns, de Bot, and Hasebrink (2007), Sundqvist (2009), Hahn (2017), Schwarz (2020), and Krüger (2023) also analyzed other factors that might correlate with vocabulary knowledge, such as socioeconomic background, attitude toward the language, gender, motivation or self-efficacy. Due to limited resources, this study only focuses on socioeconomic background as an additional possible correlating factor. The results of how socioeconomic background correlates with EE engagement and vocabulary knowledge are discussed in the following paragraphs.

The expected correlation between socioeconomic background and EE activities is not confirmed; the null hypothesis could not be rejected. This aligns with Sundqvist's (2009: 198) findings, which did not detect a significant correlation between EE and parents' educational background or the number of books in the home. In this study, these two parameters, along with HISEI, were combined to calculate the social status (s) (Pham, Freunberger & Robitzsch 2014; cf. chapter 6.5). Since Sundqvist's parameters are included in the social status, the results can be compared. Similarly, Hahn (2017: 121) found no significant correlation when using the SES (socioeconomic status) variable, which included parameters closely aligned with those in this study's social status measure, namely HISCO[3], HISCED[4], and the number of books at home. Krüger (2023: 147) also reported a lack of correlation, employing HISCED and objectified cultural capital to represent socioeconomic background.

These consistent findings suggest that socioeconomic background may not play a substantial role in determining EE engagement. Notably, all participants in this study own a smartphone and have Internet access, regardless of their social status. This universal access to digital resources, along with the vast availability of English content online, could help mitigate potential social disparities in EE engagement. As a result, learners from various backgrounds

[3] Highest international standard classification of occupation
[4] Highest international standard classification of education

may have relatively equal opportunities to engage with English outside formal educational settings.

On the other hand, socioeconomic background moderately correlates with receptive vocabulary breadth. When analyzing the difference in vocabulary test scores between low and high-social status groups, the difference is statistically significant, and the effect size indicates that the magnitude of the difference is modest. Berns, de Bot, and Hasebrink (2007) positively correlated parental education and vocabulary test scores, supporting the findings of this thesis. Moreover, Schwarz (2020: 234) revealed a positive correlation as well (between SES and V_YesNo).

These findings present a nuanced understanding of the relationship between socioeconomic background, EE engagement, and vocabulary breadth. Although socioeconomic status does not correlate with the frequency of EE engagement, it does correlate with vocabulary breadth. This suggests that there might be other factors related to socioeconomic background that contribute to vocabulary development. Krüger (2023: 166) provides evidence that parents of higher social status have a higher education and thus probably have higher English proficiency. Furthermore, the chances of English being spoken at home increase. Additionally, parents perceive English as a valuable skill (2023: 166). This could lead to higher support for teenagers to learn the language and increase motivation, which would explain the results of this study.

Moreover, given that people engage in EE activities at varying levels regardless of their socioeconomic background, this variation might be influenced by another factor not directly related to their socioeconomic background. Other factors correlating with EE engagement are, for instance, wanting to learn the language (Krüger 2023: 131) or attitude towards the language (Hahn 2017: 108-109; Krüger 2023: 131; Sundqvist 2009: 176).

Finally, the differences between the two school types, FSB and HLS, are discussed in the following. Their EE engagement does not indicate significant differences, which also counts for their productive EE engagement. At the same time, their receptive vocabulary breadth and their social status differ significantly. These results are statistically significant, indicating that there are real differences between the two groups. However, the small effect size suggests that this difference, while real, is not large and may not have a substantial impact. In general, this implies that the two classes are more similar than different in terms of overall EE engagement, vocabulary breadth, and socioeconomic background.

The overall EE engagement does not differ, but a detailed analysis of the differences between each activity revealed that HLS students, on average, read longer texts such as informational texts and books. FSB students, on the contrary, spend more time watching English series or movies and being on social media. With regards to Sundqvist's (2009) categorization of active and productive activities, reading informational texts and books in English is classified as an active activity that requires more effort and engagement. As mentioned above, high-proficient learners also engage more frequently in reading books and articles. Therefore, it could be argued that these activities contribute to the, on average, higher vocabulary breadth of HLS students.

The correlation between EE engagement and vocabulary breadth, along with the influence of socioeconomic factors, appears consistent across both school types examined in this study. Although the overall level of engagement in EE activities is similar between the two groups, differences in vocabulary breadth and social status suggest that these patterns hold in both school contexts. Consequently, the findings reinforce the idea that while students across different socioeconomic contexts may engage in similar EE activities, the impact of these activities on vocabulary development may vary, potentially due to underlying socioeconomic differences that affect the quality or depth of engagement.

8.1 Implications Regarding Education and Teaching

Considering recent findings, it is crucial to discuss how these insights can be effectively integrated into educational practices, particularly in the context of teaching English as a foreign language. Research suggests that fostering engagement in EE activities among students can significantly enhance their vocabulary breadth. As Sundqvist and Sylvén (2016: 205-206) articulate, teachers should encourage students to participate in EE activities, as these experiences contribute to broader vocabulary acquisition.

One practical approach to promoting EE engagement is to implement an "EE Challenge" (Sundqvist & Sylvén 2016: 172). Such a challenge could serve as a motivational tool, particularly for students who are new to EE. By introducing them to a variety of activities, students might discover an interest in EE, which could lead to sustained engagement. For those already familiar with EE, the challenge could encourage them to explore new and diverse activities, further enriching their learning experience (Sundqvist & Sylvén 2016: 172).

It is important to emphasize the value of productive activities within EE, as these activities, which require active participation and cognitive effort, correlate more strongly with vocabulary development. Sundqvist (2009) highlights that such engagement, particularly in activities demanding closer attention, is highly beneficial for language acquisition. Additionally, students should be informed about the specific benefits of various EE activities, such as playing video games in English, reading English books, or consuming English content on social media. They need to understand that while these activities all contribute positively to language learning, they do so to different extents. For example, reading a book in English is likely to have a more significant impact on their language development than watching a TV series. The more involved learners are in a task and the more they notice regarding words or structure, the more impact the task will have on language acquisition. This understanding aligns with the *Involvement Hypothesis* (Hulstijn & Laufer 2001) *and* the *Noticing Hypothesis* (Schmidt 1990, 1994, 2001).

Furthermore, the concepts of autonomy and authenticity, are crucial for effective language learning in IDLE and, therefore, also in EE contexts (Lee 2022: 18). These principles should be integrated into formal educational settings to enhance student motivation and engagement. Allowing students to pursue activities that genuinely interest them can significantly boost their motivation to learn. Additionally, the educational environment often fails to provide students with authentic language input, a gap that can be addressed by utilizing the vast amount of authentic content available on the internet. Incorporating such content into the classroom could provide students with the real-world language exposure necessary for meaningful learning.

In conclusion, these findings emphasize the importance of integrating EE into the educational framework, promoting both autonomy and authenticity in language learning, and encouraging students to engage in productive, meaningful activities that align with their interests. This approach not only enhances vocabulary acquisition but also fosters a more engaging and effective language-learning experience. Educating students about the benefits of different EE activities and the importance of active engagement and involvement will further optimize their language learning outcomes.

8.2 Limitations of the Study

The limitations of this study are largely due to the constraints associated with conducting a master's thesis, particularly in the context of limited resources and time. Balancing the demands of this research with other work commitments significantly reduced the time available for this study, necessitating a smaller and more manageable scope. Consequently, the sample size was limited, which means that the results of this study are specific to the sample used and cannot be generalized to the broader population, such as all students in Austria. A larger sample size would be essential to produce more reliable and generalizable findings.

Moreover, the statistical analysis conducted in this study was relatively simple. While it provided valuable insights, more advanced statistical tests could have further strengthened the results. For instance, EE engagement and vocabulary scores were grouped into only two categories for the Mann-Whitney Test. More detailed groupings could have provided more nuanced results. Additionally, as this was a quantitative study, a mixed-method approach, including qualitative data, would have allowed for a more thorough, rich, and improved understanding of the situation. Such an approach helps reveal the processes and multiple perspectives involved in a phenomenon, thereby increasing the credibility and usefulness of the research findings (Cohen, Manion & Morrison 2018: 33). For future research, employing techniques such as regression analysis would be beneficial to explore the degree of influence different variables have on EE engagement and vocabulary breadth.

Another limitation is the scope of variables considered. Although socioeconomic background was included, other potentially significant factors, such as attitude, gender, and motivation, were not explored. Investigating these additional variables could offer a more comprehensive understanding of the factors influencing EE engagement.

It is also important to note that this study identified a correlation between EE engagement and vocabulary breadth, indicating that students who engage in more EE activities tend to have a broader vocabulary. However, the analysis did not determine the direction of this relationship—whether EE engagement influences vocabulary breadth or if students with a broader vocabulary are more likely to engage in EE activities. Further research would be necessary to establish causality.

Another limitation of using questionnaires to collect data is that the information provided by respondents is subjective and could potentially distort the results. Implementing additional tools, such as an EE diary, could provide a more accurate measure of students' engagement in daily activities, similar to the approach used by Sundqvist (2009).

Finally, although the questionnaire collected a substantial amount of information, the scale of this study limited the extent to which all aspects could be analyzed. To build on this study's findings, a larger sample size, the inclusion of more variables correlating with EE engagement, and more detailed statistical analyses are recommended for future research.

9 Conclusion

This study aimed to investigate the relationship between EE engagement and receptive vocabulary breadth among students from two types of higher secondary schools in Lower Austria: HLS (vocational college for social management) and FSB (vocational school for social occupations). Using a quantitative approach, data was collected via a questionnaire to assess students' EE engagement and a vocabulary test to measure their receptive vocabulary knowledge. The research has demonstrated that there is a positive correlation between the EE engagement of HLS and FSB students and their receptive vocabulary breadth. In other words, students from these school types who frequently engage in EE activities score higher on the vocabulary test. Additionally, the findings indicate that the correlation between productive EE engagement and vocabulary breadth is stronger. This suggests that learners who engage in more productive EE have a higher vocabulary breadth than those who only engage in receptive EE activities.

In addition to confirming the importance of EE, this study also explored the variable of socioeconomic background and its relationship with both EE engagement and vocabulary breadth. The analysis revealed no significant correlation between socioeconomic status and overall EE engagement. This indicates that regardless of social standing, students are engaging in similar types of EE activities. However, a moderate correlation was observed between socioeconomic background and receptive vocabulary breadth, suggesting that students from higher social status backgrounds scored better on the vocabulary test. This implies that other factors beyond EE engagement may also play a role in vocabulary acquisition.

Finally, the comparison between the two school types, FSB and HLS, revealed no significant differences in overall EE engagement or productive EE activities. However, there were statistically significant differences in receptive vocabulary breadth and social status between the groups. HLS students, on average, scored higher in both vocabulary breadth and social status. A more detailed analysis revealed that HLS students spend more time reading longer texts such as informational texts and books, which are considered active and productive activities requiring more effort. In contrast, FSB students engage more with passive activities like watching English series or movies and spending time on social media. As high-proficient learners tend to engage more in reading, it could be argued that the reading habits of HLS students contribute to their higher vocabulary breadth. However, the effect sizes for these

differences were small, suggesting that while these differences exist, they may not be substantial.

The findings of this study suggest that EE plays a significant role in English language learning, aligning with previous studies that have highlighted the positive impact of informal language exposure on vocabulary acquisition. However, further research is needed to refine and expand upon these findings. Future studies could explore a broader range of variables, including different forms of EE engagement and their effects on both receptive and productive vocabulary knowledge. Additionally, expanding the research to include a more diverse participant sample and utilizing more advanced statistical techniques would help to deepen the understanding of how EE influences language development.

10 References

Akbary, Maryam; Shahriari, Hesamoddin; Fatemi, Azar H. 2018. "The value of song lyrics for teaching and learning English phrasal verbs: A corpus investigation of four music genres". *Innovation in Language Learning and Teaching* 12(4), 344-356.

Al-Hazemi, Hassan A. A. 1993. "Low-level EFL vocabulary tests for Arabic speakers". *ProQuest Dissertations & Theses.*

Ansarin, Ali A.; Khabbazi, Salva K. 2021. "Task-induced involvement load and working memory: Effects on active and passive vocabulary knowledge of EFL learners in multimedia learning environment". *Eurasian Journal of Applied Linguistics* 7(1), 277-302.

Ashcroft, Robert J.; Garner, Joseph; Hadingham, Oliver. 2018. "Incidental vocabulary learning through watching movies." *Australian Journal of Applied Linguistics* 1(3), 135-147.

Arnold, Nike. 2009. "Online extensive reading for advanced foreign language learners: An evaluation study". *Foreign Language Annals* 42(2), 340-366.

Baudot, Jean. 1992. *Fréquences d'utilisation des mots en français écrit contemporain*. Montréal: Presses de l'Univ. de Montréal.

Benson, Phil. 2001. *Teaching and researching autonomy in language learning.* Harlow: Pearson Education.

Berns, Margie. 2007a. "The presence of English: Sociocultural, acquisitional, and media dimensions". In Berns, Margie; de Bot, Kees; Hasebrink, Uwe (eds.). *In the presence of English: Media and European youth*. New York, NY: Springer, 1-14.

Berns, Margie. 2007b. "An empirical approach to the presence of English". In Berns, Margie; de Bot, Kees; Hasebrink, Uwe (eds.). *In the presence of English: Media and European youth*. New York, NY: Springer, 1-14.

Berns, Margie; Claes, Marie-Thérèse; de Bot, Kees; Evers, Riet; Hasebrink, Uwe; Huibregtse, Ineke; Truchot, Claude; van de Wijst, Per. 2007. "English in Europe". In Berns, Margie; de Bot, Kees; Hasebrink, Uwe (eds.). *In the presence of English: Media and European youth.* New York, NY: Springer, 15-42.

Berns, Margie; de Bot, Kees; Hasebrink, Uwe. 2007. *In the presence of English: Media and European youth.* New York, NY: Springer.

Black, Rebecca W. 2005. "Access and affiliation: The literacy and composition practices of English-language-learners in an online fanfiction community". *Journal of Adolescent & Adult Literacy* 49(2), 118-128.

BMBWF.2015a. "Höhere Lehranstalt für wirtschaftliche Berufe, Fachrichtug Sozialmanagment/Lehrplan". https://api.abc.berufsbildendeschulen.at/uploads/HLW_FR_Sozialmanagement_dbb1c770af.pdf (23 Aug. 2023).

BMBWF. 2015b. „Fachschule für Sozialberufe/Lehrplan". https://api.abc.berufsbildendeschulen.at/uploads/FS_fuer_Sozialberufe_8399c035fb.pdf (18 Aug. 2023).

British Council. n.d. "Understand your English level". https://learnenglish.britishcouncil.org/english-levels/understand-your-english-level (25 Aug. 2024).

Chang, Anna C-S; Hu, Hsueh-chao Marcella. 2018. "Learning vocabulary through extensive reading: Word frequency levels and L2 learners' vocabulary knowledge level." *TESL-EJ* 22(1), 1-20.

Chi, Seo W.; Chan, Wai M. 2011. “Learning beyond the classroom: Language podcast as supplementary learning material”. *Ubiquitous learning* 3(2), 21-40.

Cohen, Louis; Manion, Lawrence; Morrison, Keith. 2018. *Research methods in education.* (8th edition). New York: Routledge.

Dalton-Puffer, Christiane; Faistauer, Renate; Vetter, Eva. 2011. “Research on language teaching and learning in Austria (2004-2009)”. *Language Teaching* 44(2), 181-211.

Day, Richard; Robb, Thomas. 2014. “Extensive Reading”. In Nunan, David; Richards, Jack C. (eds.). *Language learning beyond the classroom*. New York: Routledge, 3-12.

de Bot, Kees; Evers, Riet. 2007. “Determinants of contact, proficiency, and attitudes”. In Berns, Margie; de Bot, Kees; Hasebrink, Uwe (eds.). *In the presence of English: Media and European youth*. New York, NY: Springer, 1-14.

de Bot, Kees; Evers, Riet; Huibregtse, Ineke. 2007. “Descriptive findings on the presence of English”. In Berns, Margie; de Bot, Kees; Hasebrink, Uwe (eds.). *In the presence of English: Media and European youth*. New York, NY: Springer, 1-14.

DerStandard. 2022. “Neue Studie: Menschen in Österreich nutzen Medien täglich 8:42 Stunden“. https://www.derstandard.at/story/2000137368176/menschen-in-oesterreichtaeglich-842-stunden-nutzen-die-medien-sagt-neue (7 Aug. 2023)

Dressman, Mark; Sadler, Randall W. 2020. *The handbook of informal language learning.* Hoboken, NJ: Wiley Blackwell.

Durrant, Philip; Siyanova-Chanturia, Anna; Kremmel, Benjamin; Sonbul, Suhad. 2022. *Research methods in vocabulary studies.* Amsterdam: John Benjamins Publishing Company.

d’Ydewalle, Géry; Gielen, Ingrid. 1992. “Attention allocation with overlapping sound, image, and text”. In Rayner, Keith (ed.). *Eye movements and visual cognition: Scene perception and reading.* New York: Springer NY, 415-427.

d’Ydewalle, Géry; Pavakanun, Ubolwanna. 1995. “Acquisition of a second/foreign language by viewing a television program”. In Winterhoff-Spurk, Peter (ed.). *Psychology of media in Europe: The state of the art-perspective for the future*. Opladen: Westdeutscher Verlag GmbH, 51-64.

d’Ydewalle, Géry; Pavakanun, Ubolwanna. 1997.“Could enjoying a movie lead to language acquisition?”. In Winterhoff-Spurk, Peter; van der Voort, Tom (eds.). *New horizons in media psychology.* Opladen: Westdeuschter Verlag GmbH, 145-155.

Ellis, Nick; Beaton, Alan. 1993. „Factors affecting the learning of foreign language vocabulary: Imagery keyword mediators and phonological short-term memory”. *The Quarterly Journal of Experimental Psychology* 46(3), 533-558.

Ellis, Rod. 2009. “Implicit and explicit learning, knowledge and instruction”. In Ellis, Rod; Loewen, Shawn; Elder, Catherine; Reinders, Hayo; Erlam, Rosemary; Philp, Jenefer (eds.). *Implicit and explicit knowledge in second language learning, testing and teaching.* Bristol: Multilingual Matters, 3-26.

Ender, Andrea. 2016. “Implicit and explicit cognitive processes in incidental vocabulary acquisition”. *Applied Linguistics* 37(4), 536-560.

Europa. 2012. “Eurobarometer: Europeans and their languages - Summary”. https://europa.eu/eurobarometer/surveys/detail/1049 (31. Dec. 2023).

European Union. n.d. “Languages”. https://european-union.europa.eu/principles-countries-history/languages_en#:~:text=Multilingualism%20is%20enshrined%20in%20the,in%20all%20official%20EU%20languages (29. Dec. 2023).

Eurostat. 2022. “What languages are studied the most in the EU?”. https://ec.europa.eu/eurostat/web/products-eurostat-news/-/ddn-20220923-1 (29 Dec. 2023).
Eyckmans, June; Van de Velde, Hans; van Hout, Roeland; Boers, Frank. 2007. “Learners’ response behaviour in Yes/No vocabulary tests”. In Daller, Helmut; Milton, James; Treffers-Daller, Jeanine (eds.). Modelling and assessing vocabulary knowledge. Cambridge, UK: CUP, 59-76.
Gairns, Ruth; Redman, Stuart. 1986. *Working with words: A guide to teaching and learning* vocabulary. Cambridge, UK: CUP.
Ganzeboom, Harry B.G.; De Graaf, Paul M.; Treiman, Donald J. 1992. “A standard international socio-economic index of occupational status.” *Social Science Research* 21(1), 1-56.
Gass, Susan M.; Varonis, Evangeline M. 1994. “Input, interaction, and second language production”. *Studies in Second Language Acquisition* 16(3), 283-302.
Gottinger, Brigitte; Norris, Susan; Pargfrieder, Petra. 2022. *Best shots 3: modular HTL/HUM.* Wien: hpt.
Grau, Maike. 2009. “Worlds apart? English in German youth cultures and in educational settings”. *World Englishes* 28(2), 160-174.
Gyllstad, Henrik; Vilkaitė, Laura; Schmitt, Norbert. 2015. “Assessing vocabulary size through multiple-choice formats: Issues with guessing and sampling rates”. *ITL – International Journal of Applied Linguistics* 16(2), 278-306.
Hahn, Magdalena. 2017. “Extramural vocabulary acquisition. A survey of students in Viennese vocational business middle schools (HAS)”. Diploma thesis, Vienna University.
Hakobyan, Nare K. 2022. “The relationship between incidental vocabulary learning and extensive listening to podcasts”. *International Journal of TESOL Studies* 5(2), 79-95.
Hamat, Afendi; Hassan, Haslinda Abu. 2019. “Use of social media for informal language learning by Malaysian university students”. *Journal of Language Teaching, Linguistics, and Literature* 25(4), 68-83.
Hasebrink, Uwe; Berns, Margie; de Bot, Kees. 2007. “In the presence of English: A resume after step one of an international study”. In Berns, Margie; de Bot, Kees; Hasebrink, Uwe (eds.). *In the presence of English: Media and European youth*. New York, NY: Springer, 111-120.
Horst, Marlise; Meara, Paul. 1999. “Test of a model for predicting second language lexical growth through reading”. *Canadian Modern Language Review* 56(2), 308-328).
Horst, Marlise. 2005. “Learning L2 vocabulary through extensive reading: A measurement study.” *The Canadian Modern Language Review* 61(3), 355-382.
House, Juliane. 2008. “English as lingua franca in Europe today”. In Extra, Guus; Gorter, Durk (eds.). *Multilingual Europe: facts and policies*. Berlin: De Gruyter Mouton, 63-86.
Hulstijn, Jan H. 1992. “Retention of inferred and given word meanings: Experiments in incidental learning”. In Arnaud, Pierre J; Béjoint, Henri (eds.). *Vocabulary and applied linguistics*. Basingstoke: Macmillan, 113-125.
Hulstijn, Jan H.; Laufer, Batia. 2001. “Some evidence for the involvement load hypothesis in vocabulary acquisition”. *Language Learning* 51/3), 539-448.
Hulstijn, Jan H. 2005. “Theoretical and empirical issues in the study of implicit and explicit second-language learning”. *Studies in Second Language Acquisition* 27(2), 129-140.
Indahsari, Dyan. 2020. “Using podcasts for EFL students in language learning”. *Journal of English Educators Society* 5(2), 103-108.

International Labor Organization. 2023. *International standard classification of occupations (ISCO-08) companion guide.* Geneva: ILO.
Jakobsson, Jorgen. 2018. "A study of the types, frequency and perceived benefits of extramural activities on Norwegian 10th graders' development of English as a foreign language". MA thesis, University of Stavanger.
Jensen, Signe H. 2017. "Gaming as an English language learning resource among young children in Denmark". *CALICO Journal* 34(1), 1-19.
Jones, Ann. 2015. "Social media for informal minority language learning: Exploring Welsh learners' practices". *Journal of Interactive Media in Education* 2015(1).
Kilgariff, Adam. 2006. "BNC database and word frequency lists". https://www.kilgarriff.co.uk/bnc-readme.html (02 Nov. 2024).
Krashen, Stephen. 1981. *Second language acquisition and second language learning.* Oxford: Pergamon.
Krashen, Stephen. 1982. *Principles and practice in second language acquisition.* Oxford: Pergamon.
Krashen, Stephen. 1985. *The input hypothesis: Issues and implications.* Harlow: Longman.
Krüger, Maleika. 2023. *Media-related out-of-school contact with English in Germany and Switzerland: Frequency, forms and the effect on language learning.* Germany: Springer Fachmedien.
Kuppens, An H. 2010. "Incidental foreign language acquisition from media exposure". *Learning, Media and Technology* 35(1), 65-85.
Laufer, Batia. 1990. "Words you know: How they affect the words you learn". In Fisiak, Jacek (ed.). *Further insights into contrastive analysis.* Amsterdam: John Benjamins, 573-593.
Laufer, Batia; Hulstijn, Jan H. 2001. "Incidental vocabulary acquisition in a second language: The construct of task-induced involvement". *Applied Linguistics* 22(1), 1-26.
Leather, Sue; Uden, Jez. 2021. *Extensive reading: The role of motivation*. New York: Routledge.
Lechner, Elmar. 2002. *Formen und Funktionen des Fremdsprachenunterrichts in Europe des 20. Jahrhunderts.* Wien: Lang.
Lee, Ju S. 2022. *Informal digital learning of English: research to practice*. New York: Routledge.
Levy, Michael. 1997. *Computer-assisted language learning: Context and conceptualisation.* Oxford: Clarendon Press.
Lognostics. n.d. *V_YesNo Manual*. https://www.lognostics.co.uk/tools/Manuals/V_YesNo_Manual.pdf (12 Jul. 2024)
Lomicka, Lara; Lord, Gillian. 2012. "A tale of tweets: Analyzing microblogging among language learners". *System* 40(1), 48-63.
Long, Michael H. 1981. "Input, interaction and second language acquisition". *Annals of the New York Academy of Sciences* 379(1), 259-278.
Long, Michael H. 1983a. "Native speaker/non-native speaker conversation and the negotiation of comprehensible input". *Applied Linguistics* 4(2), 126-141.
Long, Michael H. 1983b. "Linguistic and conversational adjustments to non-native speakers". *Studies in Second Language Acquisition* 5(2), 177-193.
McLean, Stuart; Kramer, Brandon. 2015. "The creation of a New Vocabulary Levels Test". *Shiken* 19(2), 1-11.
McLean, Stuart; Kramer, Brandon; Stewart Jeffrey. 2015. "An empirical examination of the effect of guessing on vocabulary size test scores". *Vocabulary Learning and Instruction* 4(1), 26-35.
Meara, Paul. 1992. *EFL Vocabulary Tests.* Swansea, UK: Swansea University.

Meara, Paul. 2015. *V_yesno*. https://www.lognostics.co.uk/tools/V_YesNo/V_YesNo.htm
Meara, Paul; Miralpeix, Imma. 2016. *Tools for researching vocabulary*. Blue Ridge Summit, PA: Multilingual Matters.
Medina, Suzanne L. 1990. "The effects of music upon second language vocabulary acquisition". *ERIC*, 1-26. https://eric.ed.gov/?id=ED352834 (14 Aug. 2023).
Milton, James. 2006. "X-Lex: The Swansea vocabulary levels test". In Coombe, Christine; Davidson, Peter; Lloyd, Dwight (eds.). *Proceedings of the 7th and 8th current trends in English language testing (CTELT) conferences.* Vol. 4. UAE: TESOL Arabia, 29-39.
Milton, James. 2009. *Measuring second language vocabulary acquisition.* Bristol: Multilingual Matters.
Mitchell, Rosamond; Myles, Florence; Marsden, Emma. 2019. *Second language learning theories.* (4th edition). New York: Routledge.
Nation, I. S. Paul. 1990. *Teaching and learning vocabulary.* New York: Heinle & Heinle Publishers.
Nation, I. S. Paul. 2009. *Teaching ESL/EFL reading and writing*. New York: Routledge.
Nation, I. S. Paul. 2022. *Learning vocabulary in another language.* (3rd edition). Cambridge, UK: CUP.
Nguyen, Le Thi Cam; Nation, Paul. 2011. "A bilingual Vocabulary Size Test of English for Vietnamese learners". 2011. *RELC journal* 42(1)*, 86-99.*
Pavia, Niousha; Webb, Stuart; Fez, Farahnaz. 2019. "Incidental vocabulary learning through listening to songs". *Studies in Second Language Acquisition* 41, 745-768.
Peters, Elke; Noreillie, Ann-Sophie; Heylen, Kris; Bulté, Bram; Desmet, Piet. 2019. „The impact of instruction and out-of-school exposure to foreign language input on learners' vocabulary knowledge in two languages". *Language Learning* 69(3), 747-782.
Pham, Giang; Freunberger, Roman; Robitzsch, Alexander. 2014. *Hintergrundvariablen und spezielle Analysen: Technische Dokumentation – BIST-Ü Englsich, 8. Schulstufe, 2013*. Salzburg: BIFIE.
Pica, Teresa; Young, Richard; Doughty, Catherine. 1987. "The impact of interaction on comprehension". *TESOL Quarterly* 21(4), 737-758.
Qing, Ma. 2009. *Second language vocabulary acquisition.* New York: Lang.
Ranalli, Jim. 2008. "Learning English with *The Sims*: Exploiting authentic computer simulation games for L2 learning". *Computer Assisted Language Learning* 21(5), 441-455.
Reber, Arthur S. 1967. "Implicit learning of artificial grammars". *Journal of Verbal Learning and Verbal Behaviour* 6(6), 855-863.
Richards, Jack C. 2015. *Key issues in language teaching.* Cambridge, UK: Cambridge UP.
Reber, Paul. 2010. "What is the memory capacity of the human brain". *Scientific American.* https://www.scientificamerican.com/article/what-is-the-memory-capacity/ (13 Jul. 2023)
Rodgers, Michael; Webb, Stuart. 2011. "Narrow Viewing: The vocabulary in related television programs". *TESOL quarterly* 45(4), 689-717.
Saferinternet.at. 2023. "Welche Sozialen Netzwerke nutzen Österreichs Jugendliche?". https://www.saferinternet.at/services/jugend-internet-monitor (7 Aug. 2023).
Sauro, Shannon; Zourou, Katerina.2019. "What are the digital wilds?". *Language Learning & Technology* 23(1), 1-7.
Sauro, Shannon. 2020. "Fan fiction and informal language learning." In Dressman, Mark; Sadler, Randall W. (eds.). *The handbook of informal language learning.* Chichester, UK: John Wiley & Sons, Ltd, 139-151.

Schmidt, Richard W. 1990. “The role of consciousness in second language learning”. *Applied Linguistics* 11(2), 129-158.
Schmidt, Richard W. 1994. “Deconstructing consciousness in search of useful definitions for applied linguistics”. In Hulstijn, Jan H.; Schmidt, Richard (eds). *AILA Review* 11, 11-26.
Schmidt, Richard W. 2001. “Attention”. In Robinson, Peter (eds.). *Cognition and second language instruction.* Cambridge: Cambridge University Press, 3-32.
Schmitt, Norbert. 1995. “A fresh approach to vocabulary using a word knowledge framework”. *RELC Journal* 26(1), 86-94.
Schmitt, Norbert; Schmitt, Diane; Clapham, Caroline. 2001. „Developing and exploring the behavior of two new versions of the Vocabulary Levels Test”. *Language Testing* 18(1), 55-88.
Schwarz, Marlene. 2020. “Beyond the walls: A mixed methods study of teenagers’ extramural English practices and their vocabulary knowledge”. PhD thesis, University of Vienna.
Shillaw, John. 1999. ”The application of the Rasch model to Yes/No vocabulary tests”. PhD thesis, Centre for Applied Language Studies, University of Wales Swansea.
Slabakova, Roumyana. 2009. “The fundamental difference hypothesis twenty years later [Special Issue]. *Studies in second language acquisition* 31(2), 155.
Sockett, Geoffrey. 2014. *The online informal learning of English.* Basingstoke: Palgrave Macmillan.
Spotify. 2024. “Quarterly Results”. https://investors.spotify.com/financials/default.aspx#quarterly-results (25 Aug. 2024).
Statista. 2021. “Number of podcast listeners worldwide from 2019 to 2024”. https://www.statista.com/statistics/1291360/podcast-listeners-worldwide/#statisticContainer (3 Aug. 2023).
Statista. 2023. “Languages most frequently used for web content as of January 2023, by share of websites”. https://www.statista.com/statistics/262946/most-common-languages-on-the-internet/ (12 Aug. 2023).
Stoeckel, Tim; McLean, Stuart; Nation, Paul. 2021. “Limitations of Size and Levels Tests of written receptive vocabulary knowledge”. *Studies in Second Language Acquisition* 43(1), 181-203.
Sundqivst, Pia. 2009. “Extramural English matters: Out-of-school English and its impact on Swedish ninth graders’ oral proficiency and vocabulary”. PhD thesis, Karlstadt University.
Sundqvist, Pia; Nilsson, Rickard. 2022. “Young gamers in the digital wilds: Implications of gaming preferences on L2 English vocabulary learning and teaching.” *Babylonia* 4(1), 14-19.
Sundqvist, Pia; Sylvén, Liss K. 2016. *Extramural English in teaching and learning: from theory and research to practice.* London: Mcmillan Publishers Ltd.
Sundqvist, Pia; Wikström, Peter. 2015. “Out-of-school digital gameplay and in-school L2 English vocabulary outcomes”. *Elsevier System* 51, 65-76.
Swain, Merrill. 1985. “Communicative competence: Some roles of comprehensible input and comprehensible output in its development”. In Gass, Susan M.; Madden, Carolyn G. (eds.). *Input in second language acquisition*. Rowley, Mass: Newbury House, 235-253.
Swain, Merrill. 2005. “The output hypothesis: Theory and research”. In Hinkel, Eli (ed.). *Handbook of research in second language teaching and learning.* New Jersey: Lawrence Erlbaum Associates Inc. Publishers, 471-483.

Thorne, Steven L. 2008. “Transcultural communication in open Internet environments and massively multiplayer online games”. In Magnan, Sally S. (ed.). *Mediating discourse online.* Amsterdam: John Benjamins, 305-327.

Turgut, Yildiz; Irgin, Pelin. 2009. “Young learners’ language learning via computer games”. *Procedia – Social and Behavioral Sciences* 1(1), 760-764.

Uchihara, Takumi; Clenton, Jon. 2020. “Investigating the role of vocabulary size in second language speaking ability”. *Language Teaching Research* 24(4), 540-556.

Ullman, Michael T. 2006. “The declarative/procedural model and the shallow structure hypothesis”. *Applied Psycholinguistics* 27(1), 97-105.

Vassiliu, P. 1994. “Vocabulary profiles: A necessary prerequisite for course book selection”. MA thesis, University of Wales Cardiff.

Vázquez-Herrero, Jorge; Negreira-Rey, Mariá-Cruz; Rodríguez-Vázquez, Ana-Isabel. 2021. “Intersections between TikTok and TV: Channels and programmes thinking outside the box”. *Journalism and Media* 2(1), 1-13.

Webb, Stuart; Chang, Anna C.S. 2015. “Second language vocabulary learning through extensive reading with audio support: How do frequency and distribution of occurrence affect learning”. *Language Teaching Research* 19(6), 639-760.

Webb, Stuart; Sasao, Yosuke; Balance, Oliver. 2017. “The updated vocabulary levels test: Developing and validating two new forms of the VLT”. ITL - *International Journal of Applied Linguistics* 168(1), 33-69.

World Bank Group Data. n.d. “Individuals using the Internet (% of population) – Europe & Central Asia”. https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=AT (07. Aug. 2023).

Zainuddin, Fatin N.; Yunus, Melor M. 2022. “Sustaining formal and informal English language learning through social networking sites: A systematic review”. *Sustainability* 14, 10852, https://doi.org/10.3390/su141710852.

Zhang, Ruofei; Zou, Di; Cheng, Gary; Xie, Haoran; Wang, Fu L.; Au, Oliver T. S. 2021. “Target languages, types of activities, engagement, and effectiveness of extramural language learning”. *PLoS ONE* 16(6), e0253431, https://doi.org/10.1371/journal.pone.0253431.

11 Appendix

Englisch in der Freizeit

Liebe Schülerin, lieber Schüler!

Dieser Fragebogen ist der erste Teil der Studie zu Englisch in der Freizeit. Die Beantwortung dauert ca. 30 min.

Es ist kein Test! Bitte beantworte die Fragen **ehrlich** und **alleine**. Es gibt keine falschen Antworten! Deine Antworten sind **anonym** und werden vertraulich behandelt.

Damit ich deinen Fragebogen mit dem anderen Teil der Studie zuordnen kann, bitte ich dich hier deinen persönlichen Code gut leserlich in Blockbuchstaben einzufüllen:

Mein Code:	☐☐ 2. und 3. Buchstabe deines Vornamens
Klasse: ⬇	☐ der letzte Buchstabe des Vornamens deiner Mutter
_____	☐☐ Geburtsmonate (z.B. 03 für März)

1a. Wie viele der folgenden Dinge habt ihr zu Hause?	**0**	**1**	**2**	**3 oder mehr**
Handys	☐	☐	☐	☐
Fernseher	☐	☐	☐	☐
Computer (Laptop, Standcomputer)	☐	☐	☐	☐

1b. Welche von diesen Geräten verwendest du zu Hause?

☐ Tablet/iPad	☐ Spielekonsole (Playstation, Xbox, …)
☐ Radio	☐ DVD-Player
☐ Mp3-Player (iPod,…)	☐ E-Book-Reader (Kindle, Tolino,…)

1c. Hast du…	**Ja**	**Nein**
ein eigenes Smartphone?	☐	☐
einen eigenen Computer oder Laptop?	☐	☐
ein eigenes Tablet?	☐	☐
ein eigenes Zimmer?	☐	☐

1d.	**Ja**	**Nein**
Hast du Internet zu Hause?	☐	☐

1e. Auf welchen Geräten (Handy, Laptop,…) benutzt du meistens das Internet?

1.➡ 2.➡ 3.➡

1f.	Ja	Nein
Benutzt du das Internet täglich?	☐	☐
wenn **ja**, wie viele Stunden pro Tag?	➡ca. _____ Stunden	

1g. Welche 5 Webseiten (auch via App wie z.B. Instagram, TikTok…) besuchst du am öftesten?

1.➡	2.➡	3.➡
4.➡	5.➡	

1h. Wo in deinem Alltag begegnet dir Englisch am meisten?

Wo hörst/liest/sprichst du Englisch am meisten? Nenne deine **Top 3.**

1.➡	2.➡	3.➡

1i. **Wie oft machst du diese Aktivitäten in deiner Freizeit?**	**(Fast) nie**	**ein paar Mal pro Jahr**	**ein paar Mal pro Monat**	**ein paar Mal pro Woche**	**(fast) täglich**
Musik hören	1	2	3	4	5
Radio hören	1	2	3	4	5
Fernsehen	1	2	3	4	5
Filme/Serien auf DVD ansehen	1	2	3	4	5
Filme/Serien im Internet (Netflix, Prime, Disney+ …) ansehen	1	2	3	4	5
Facebook benutzen	1	2	3	4	5
Instagram benutzen	1	2	3	4	5
TikTok benutzen	1	2	3	4	5
Snapchat benutzen	1	2	3	4	5
Videos im Internet ansehen (YouTube, …)	1	2	3	4	5
Spiele alleine spielen (Computer, Playstation, …)	1	2	3	4	5
Spiele mit anderen gemeinsam spielen (Multiplayer Online Games)	1	2	3	4	5
Spiele am Handy oder Tablet spielen	1	2	3	4	5
Zeitungen/Zeitschrift lesen (auch online)	1	2	3	4	5
Bücher/E-Books lesen	1	2	3	4	5
Hörbücher hören	1	2	3	4	5
FreundInnen treffen	1	2	3	4	5
Sport machen	1	2	3	4	5
Musik machen (singen/Instrument spielen)	1	2	3	4	5
auf Konzerte gehen	1	2	3	4	5
ins Kino gehen	1	2	3	4	5
ins Theater gehen	1	2	3	4	5

Andere Aktivitäten, nämlich: ➡_____	1	2	3	4	5
➡_____	1	2	3	4	5

2. Englische Freizeitaktivitäten

Mich interessiert, was du **in deiner Freizeit** (außerhalb der Schule) **auf ENGLISCH** machst. Also alles was du auf Englisch **NICHT** in der Schule, für die Schule oder von der Schule aus machst (keine Hausübung, Referate, Leseaufgaben, Schulaktivitäten, …)

2a. **Wie oft machst du diese Aktivitäten <u>in deiner Freizeit</u> auf ENGLISCH?**	**(Fast) nie**	**ein paar Mal pro Jahr**	**ein paar Mal pro Monat**	**ein paar Mal pro Woche**	**(fast) täglich**
Englischsprachige Musik					
…am Handy (oder mp3-Player wie iPod) hören	1	2	3	4	5
…auf CD oder im Radio hören	1	2	3	4	5
…auf Spotify oder andere Musikdienste hören	1	2	3	4	5
…mitsingen	1	2	3	4	5
…selbst singen (auch Karaoke)	1	2	3	4	5
…auf Konzerten hören	1	2	3	4	5
Englischsprachige Songtexte					
…lesen	1	2	3	4	5
…übersetzen oder Übersetzung lesen	1	2	3	4	5
…schreiben	1	2	3	4	5
Englischsprachige Filme					
…im Fernsehen ansehen	1	2	3	4	5
…auf DVD ansehen **<u>mit</u>** Untertitel	1	2	3	4	5
…auf DVD ansehen **<u>ohne</u>** Untertitel	1	2	3	4	5
…im Internet ansehen (z.B. YouTube, Netflix, Disney+) **<u>mit</u>** Untertitel	1	2	3	4	5
…im Internet ansehen (z.B. YouTube, Netflix, …) **<u>ohne</u>** Untertitel	1	2	3	4	5
…im Kino ansehen	1	2	3	4	5
<u>Zur Erinnerung:</u> **Denk bitte nur an deine <u>Freizeit!</u>** (keine Hausübungen, Schulausflüge, etc.)	**(Fast) nie**	**ein paar Mal pro Jahr**	**ein paar Mal pro Monat**	**ein paar Mal pro Woche**	**(fast) täglich**
Englischsprachige Serien					
…im Fernsehen ansehen	1	2	3	4	5
…auf DVD ansehen **<u>mit</u>** Untertitel	1	2	3	4	5
…auf DVD ansehen **<u>ohne</u>** Untertitel	1	2	3	4	5
…im Internet ansehen (z.B. YouTube, Netflix, Disney+) **<u>mit</u>** Untertitel	1	2	3	4	5
…im Internet ansehen (z.B. YouTube, Netflix, …) **<u>ohne</u>** Untertitel	1	2	3	4	5

In welcher Sprache sind die Untertitel bei Filmen und Serien meistens? ➡ _____					
Englischsprachige Sendungen (z.B. Dokus, Reportagen, etc.)					
…im Fernsehen ansehen	1	2	3	4	5
…im Radio anhören	1	2	3	4	5
…im Internet (z.B. YouTube, Netflix, Disney+) ansehen **mit** Untertitel	1	2	3	4	5
…im Internet ansehen (z.B. YouTube, Netflix, …) **ohne** Untertitel	1	2	3	4	5
Englische Podcasts auf Spotify oder anderen Musikdiensten anhören	1	2	3	4	5
Englischsprachige Videos (z.B. YouTube)					
…im Internet ansehen	1	2	3	4	5
…selbst machen	1	2	3	4	5
In sozialen Netzwerken (TikTok, Instagram,…)					
…englischsprachige Videos ansehen	1	2	3	4	5
…englischsprachige Videos selbst posten	1	2	3	4	5
…englischsprachige Posts/Kommentare lesen	1	2	3	4	5
…englischsprachige Posts/Kommentare (auch zu Fotos) schreiben	1	2	3	4	5
…englischsprachige Nachrichten lesen	1	2	3	4	5
…englischsprachige Nachrichten schreiben	1	2	3	4	5
…live gehen und mit anderen kommunizieren	1	2	3	4	5
Folgst du englischsprachigen Influencern auf Tiktok, Instagram,..? …welchen? ➡ _____	1	2	3	4	5
Englischsprachige Spiele					
…am Tablet, Handy spielen	1	2	3	4	5
…am Computer oder auf Spielekonsole spielen	1	2	3	4	5
…mit anderen über Internet spielen (Multiplayer)	1	2	3	4	5
Wenn du mit anderen im Internet spielst,					
…chattest du auf Englisch in In-Game Chats	1	2	3	4	5
…sprichst du Englisch über Discord, Mumble, …	1	2	3	4	5
Zur Erinnerung: **Denk bitte nur an deine Freizeit!** (keine Hausübungen, Schulausflüge, etc.)	**(Fast) nie**	**ein paar Mal pro Jahr**	**ein paar Mal pro Monat**	**ein paar Mal pro Woche**	**(fast) täglich**
Englischsprachige Bücher					
…in Papierform lesen	1	2	3	4	5
…digital (z.B. E-Reader wie Kindle) lesen	1	2	3	4	5
…als Hörbuch anhören	1	2	3	4	5
Englischsprachige Artikel (z.B. Zeitung, Zeitschriften, …)					
…in Papierform lesen	1	2	3	4	5
…im Internet lesen	1	2	3	4	5

Englischsprachige Informationstexte (z.B. Anleitungen, Rezepte etc.)					
…in Papierform lesen	1	2	3	4	5
…im Internet lesen (auch z.B. Wikipedia)	1	2	3	4	5
Englischsprachige Geschichten/Fan-Fiction					
…lesen	1	2	3	4	5
…schreiben	1	2	3	4	5
Englischsprachige Comics/Mangas					
…lesen	1	2	3	4	5
…schreiben	1	2	3	4	5
Englischsprachige Blogs/Foreneinträge (z.B. zu Spielen)					
…lesen	1	2	3	4	5
…schreiben oder kommentieren	1	2	3	4	5
Suchmaschinen (z.B. Google) auf Englisch benutzen	1	2	3	4	5
Englischsprachige Apps am Handy benutzen	1	2	3	4	5
…Welche Apps? ➡_____					
Englischsprachige E-Mails					
…lesen	1	2	3	4	5
…schreiben	1	2	3	4	5
Englischsprachige Nachrichten (WhatsApp, Signal, Telegram, SMS)					
…lesen	1	2	3	4	5
…schreiben	1	2	3	4	5
…Mit wem schreibst du auf Englisch? (Eltern, Freunde, usw. KEINE NAMEN) ➡ _____					
Listen oder Notizen auf Englisch schreiben	1	2	3	4	5
Tagebuch auf Englisch schreiben	1	2	3	4	5
Englisch sprechen					
…am Telefon (telefonieren oder Sprachnachrichten senden)	1	2	3	4	5
…in Telefonaten via soziale Medien (Instagram, Snapchat,…)	1	2	3	4	5
…persönlich mit jemanden	1	2	3	4	5
Mit wem sprichst du Englisch in deiner Freizeit? (Eltern, Freunde, usw. KEINE NAMEN) ➡ _____					
Auf Englisch denken/mit mir selbst reden	1	2	3	4	5
Englische Wörter verwenden, wenn du eine andere Sprache sprichst	1	2	3	4	5
Englische Theaterstücke					
…ansehen	1	2	3	4	5
…selbst spielen	1	2	3	4	5
Machst du noch andere Aktivitäten auf Englisch in deiner Freizeit? Wenn **ja**, welche?					
➡_____	1	2	3	4	5

➡_____	1	2	3	4	5

2b. Gib Titel oder genaue Beschreibung an	**Ja**	**Nein**
Hast du einen englischsprachigen Lieblingsfilm (oder mehrere)? …wenn **ja**, welchen? ➡	☐	☐
Hast du eine englischsprachige Lieblingsserie (oder mehrere)? …wenn **ja**, welche? ➡	☐	☐
Hast du ein englischsprachiges Lieblingscomputerspiel (oder mehrere)? …wenn **ja**, welches? ➡	☐	☐
Hast du ein englischsprachiges Lieblingsbuch (oder mehrere)? …wenn **ja**, welches? ➡	☐	☐
Liest du etwas Bestimmtes auf Englisch (z.B. Zeitschrift, Blog…)? *Bitte beschreibe es* …wenn **ja**, was? ➡	☐	☐
Siehst du dir etwas Bestimmtes auf Englisch im Internet an (YouTube, TikTok, Instagram)? *Bitte beschreibe es* …wenn **ja**, was? ➡	☐	☐
Bei englischsprachiger Musik sind die Songtexte für mich… ☐ Gar nicht wichtig ☐ Nicht so wichtig ☐ Eher wichtig ☐ Sehr wichtig		

2c. Denke an die Osterferien letzte Woche. Wie viel Zeit hast du <u>durchschnittlich</u> pro Tag mit <u>englischen FREIZEITaktivitäten</u> verbracht (englische Musik hören, Filme/Serien ansehen, lesen usw.)?

➡_____ ☐ Minuten ☐ Stunden pro Tag

2d. Welche Sprachen sprichst du in deiner <u>FREIZEIT</u> (Freunde, Familie, …)?

1. am Meisten➡	am 2. Meisten➡
am 3. Meisten➡	am 4. Meisten➡

2e. **Warum sprichst du Englisch in deiner Freizeit?**	**Trifft gar nicht zu**	**Trifft eher nicht zu**	**Trifft eher zu**	**Trifft völlig zu**
Vieles gibt es nur auf Englisch	1	2	3	4
Ich möchte mein Englisch verbessern	1	2	3	4
Ich brauche Englisch für internationale Kontakte und Freundschaften	1	2	3	4
Vieles klingt auf Englisch besser	1	2	3	4
Ich habe einfach Lust, Englisch zu verwenden	1	2	3	4
Ich spreche Englisch mit Freunden oder Familie.	1	2	3	4
Ich mag keine Übersetzungen und interessiere mich für das Original (z.B. Filme, Serien, Bücher, …)	1	2	3	4

Andere Gründe: ➡_____

3. Sprachliche Umgebung **3a. Wo siehst du oder hörst du Englisch im Alltag?**	**(Fast) nie**	**ein paar Mal pro Jahr**	**ein paar Mal pro Monat**	**ein paar Mal pro Woche**	**(fast) täglich**
Auf der Straße	1	2	3	4	5
An öffentlichen Plätzen (z.B. Bahnhof, Parks, etc.)	1	2	3	4	5
In öffentlichen Verkehrsmitteln	1	2	3	4	5
In öffentlichen Ämtern, Banken, etc.	1	2	3	4	5
In Geschäften oder Einkaufszentren	1	2	3	4	5
In Cafés, Restaurants, etc.	1	2	3	4	5
An Orten, wo ich meine Hobbys ausübe (Fitnessstudio, Musikschule, etc.)	1	2	3	4	5
Zu Hause	1	2	3	4	5

3b. **Bitte denke jetzt an alle Situationen in denen du Englisch verwendest, also es sprichst, liest, hörst, oder schreibst, Denke auch an alle „unwichtigen" Situationen, z.B. wenn du nur ein paar Wörter verwendest.**

Wo verwendest du Englisch mehr? ☐ Im Schulunterricht ☐ in meiner Freizeit

4. Sprachlicher Hintergrund

*In einigen Fragen kommen die Begriffe **„englischsprachiges Land"** und **„nicht-englischsprachiges Land"** vor. Mit ersterem sind Staaten gemeint, in denen Englisch eine offizielle Sprache ist (z.B. USA, Australien, UK). Mit zweiterem sind Staaten gemeint, in denen Englisch keine offizielle Sprache ist, das bedeutet natürlich nicht, dass man dort nicht Englisch sprechen kann.*

4a. Welche Sprachen sprichst du …

Wenn etwas nicht zutrifft, lass die Zeile leer! ⬇ Trage hier die Sprachen ein!
…mit deiner Mutter?
…mit deinem Vater?
…mit deinen Geschwistern?
…mit anderen, die bei dir zu Hause wohnen? (z.B. Großeltern, Partner von Mutter/Vater)
…meistens mit deinen besten Freunden?
Welche Sprache sprechen deine Eltern miteinander?

4b.	**Ja**	**Nein**
Gibt es Menschen mit denen du oft Englisch sprichst (außerhalb des Unterrichts) …wenn **ja**, mit wem? ➡	☐	☐
4c.	**Ja**	**Nein**
Hattest du in der Volkschule Englischunterricht?	☐	☐

Wann hast du begonnen Englisch zu lernen?	➡ Mit ca.	Jahren.
4d.	**Ja**	**Nein**
Warst du auf Sprachcamps oder internationalen Feriencamps, auf denen Englisch gesprochen wurde? …wenn **ja**, wie oft und wie lange? ➡	☐	☐
4e.		
Wie oft warst du schon in englischsprachigen Ländern auf Urlaub ☐ Noch nie ☐ 1-3-mal ☐ 4-6-mal ☐ Mehr als 6-mal …und zwar in: ➡		
4f.		
Wie viel Englisch hast du auf vergangenen Urlaub in nicht-englischsprachigen Ländern verwendet? ☐ Sehr wenig ☐ Ziemlich wenig ☐ Ziemlich viel ☐ Sehr viel		
4g.	**Ja**	**Nein**
Hast du jemals mehr als 3 Monate in einem Land gewohnt, wo du dich auf Englisch verständigt hast? (auch nicht-englischsprachige Länder!) …**wenn** ja, wo und wie lange (in Monaten)?	☐	☐
1.in ➡	für ca.	Monate
2.in ➡	für ca.	Monate
3.in ➡	für ca.	Monate

4h. Welche Note hattest du letztes Jahr in Englisch?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

4i. Welche Note wirst du wahrscheinlich dieses Jahr in Englisch bekommen?

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

5. Du und deine Familie

Du hast es fast geschafft! Bitte beantworte zum Schluss nur noch einige Frage, damit ich die Ergebnisse besser auswerten kann.

Wenn eine Frage nicht auf dich oder deine Eltern zutrifft, lass die Zeile einfach leer!

5a. dein Geburtsjahr: _____ und dein Geburtsland: _____

5b. Was ist die höchste Ausbildung, die deine Eltern abgeschlossen haben?	**Mutter**	**Vater**
Er/Sie hat keine Ausbildung abgeschlossen	☐	☐
Pflichtschule (Volkschule + Hauptschule/Unterstufe)	☐	☐
Berufsschule / Lehrer	☐	☐
Lehre mit Meisterprüfung	☐	☐
Höhere Schule ohne Matura (z.B. Fachschule, Handelsschule, Krankenpflegeschule, …)	☐	☐
Allgemeinbildende Höhere Schule mit Matura (AHS = Gymnasium)	☐	☐

Berufsbildende Höhere Schule mit Matura (BHS, z.B. HAK, HLS, HLW, HTL, auch Kollegs oder Aufbaulehrgänge)	☐	☐
Fachhochschule, Pädagogische Akademie oder Universitätsstudium mit BA oder vergleichbaren Abschluss	☐	☐
Fachhochschule oder Universitätsstudium mit Mag., MA oder Dipl.-Ing.	☐	☐
Universitätsstudium mit Dr.	☐	☐
Ich weiß es nicht.	☐	☐

5c. Welchen Beruf übt deine Mutter aus? ➡_____

5d. Wo arbeitet sie und was macht sie in ihrem Beruf normalerweise?

➡_____

5e. Welchen Beruf übt dein Vater aus? ➡_____

5f. Wo arbeitet er und was macht er in seinem Beruf normalerweise?

➡_____

5g. Wie viele Bücher gibt es bei dir zu Hause?

Auf einen Meter Bücherregal passen ungefähr 40 Bücher.

Schätze bitte die Anzahl aller Bücher (egal in welcher Sprache), aber zähle Zeitschriften, Zeitungen und deine Schulbücher NICHT mit)

☐ zwischen 0 und 10 Bücher
☐ zwischen 11 und 50 Bücher
☐ zwischen 50 und 100 Bücher
☐ zwischen 101 und 200 Bücher
☐ zwischen 201 und 500 Bücher
☐ mehr als 500 Bücher

Danke für deine Mitarbeit! ☺

Yes/No Aufgabe

Liebe Schülerin, lieber Schüler!
Diese Überprüfung des Wortschatzes ist der zweite Teil der Studie zu Englisch in der Freizeit. Die Beantwortung dauert ca. 10 min.
Es ist kein Test! Bitte mache die Aufgabe somit alleine und ehrlich. Es gibt keine falschen Antworten! Deine Antworten sind anonym und werden vertraulich behandelt.

Damit ich deinen Fragebogen mit dem anderen Teil der Studie zuordnen kann, bitte ich dich hier deinen persönlichen Code gut leserlich in Blockbuchstaben einzufüllen:

Mein Code:	☐☐ 2. und 3. Buchstabe deines Vornamens
Klasse: ⬇	☐ der letzte Buchstabe des Vornamens deiner Mutter
_____	☐☐ Geburtsmonate (z.B. 03 für März)

Hinweise zum Ausfüllen:
Auf den nächsten Seiten wirst du Listen von Wörtern sehen.
Bitte lies dir die Wörter genau durch und kreuze für jedes Wort Yes oder No an:
→Wenn du weißt, was das Wort heißt, kreuze Yes an.
→Wenn du nicht weißt, was das Wort heißt, kreuze No an.

Achtung!!
Zur Kontrolle sind Wörter eingebaut, die es im Englischen gar nicht gibt!
Es werden Punkte abgezogen, wenn du so ein erfundenes Wort mit Yes ankreuzt. Also bitte, kreuze nur die Wörter mit Yes an, die du auch wirklich kennst und weißt, was sie bedeuten.

Hier ist ein Beispiel:

Block A	
which	☐ Yes ☐ No
industry	☐ Yes ☐ No

Block B	
siddy	☐ Yes ☐ No
doll	☐ Yes ☐ No

Und los geht's!
→

Ich weiß, was das Wort heißt:

Block A		
acute	☐Yes	☐No
podiast	☐Yes	☐No
malicious	☐Yes	☐No
fair	☐Yes	☐No
adjoin	☐Yes	☐No
makeshift	☐Yes	☐No
grudgingly	☐Yes	☐No
intimant	☐Yes	☐No
elphick	☐Yes	☐No
exemptation	☐Yes	☐No
rudge	☐Yes	☐No
misrequite	☐Yes	☐No
copper	☐Yes	☐No
todd	☐Yes	☐No
corn	☐Yes	☐No
greer	☐Yes	☐No
harridism	☐Yes	☐No
tranquil	☐Yes	☐No
leucan	☐Yes	☐No
costliness	☐Yes	☐No
sleek	☐Yes	☐No
dressy	☐Yes	☐No
elegance	☐Yes	☐No
carotic	☐Yes	☐No
insinuate	☐Yes	☐No
opie	☐Yes	☐No
breakwith	☐Yes	☐No
watler	☐Yes	☐No
spalding	☐Yes	☐No
strappery	☐Yes	☐No
concerned	☐Yes	☐No
pegler	☐Yes	☐No
analyse	☐Yes	☐No
shady	☐Yes	☐No
daintiness	☐Yes	☐No
fly	☐Yes	☐No
asbestial	☐Yes	☐No
engineer	☐Yes	☐No
keir	☐Yes	☐No
arbus	☐Yes	☐No

Block B		
bibby	☐Yes	☐No
liverick	☐Yes	☐No
flautism	☐Yes	☐No
greenaway	☐Yes	☐No
appreciate	☐Yes	☐No
wood	☐Yes	☐No
rumour	☐Yes	☐No
allaway	☐Yes	☐No
snape	☐Yes	☐No
bayonet	☐Yes	☐No
barmion	☐Yes	☐No
sedgebeer	☐Yes	☐No
boobier	☐Yes	☐No
sincere	☐Yes	☐No
undergraduate	☐Yes	☐No
application	☐Yes	☐No
detailoring	☐Yes	☐No
scamper	☐Yes	☐No
calves	☐Yes	☐No
stimulation	☐Yes	☐No
peebles	☐Yes	☐No
givewith	☐Yes	☐No
invest	☐Yes	☐No
integrality	☐Yes	☐No
surman	☐Yes	☐No
nonagrate	☐Yes	☐No
candish	☐Yes	☐No
harass	☐Yes	☐No
purchaser	☐Yes	☐No
redemption	☐Yes	☐No
decisively	☐Yes	☐No
vergial	☐Yes	☐No
convolition	☐Yes	☐No
displace	☐Yes	☐No
plagorate	☐Yes	☐No
alternate	☐Yes	☐No
ottery	☐Yes	☐No
frown	☐Yes	☐No
fresh	☐Yes	☐No
sample	☐Yes	☐No

Ich weiß, was das Wort heißt:

Block C		
advise	☐Yes	☐No
munch	☐Yes	☐No
reticence	☐Yes	☐No
honesty	☐Yes	☐No
couth	☐Yes	☐No
fearle	☐Yes	☐No
innoculism	☐Yes	☐No
expand	☐Yes	☐No
numb	☐Yes	☐No
ethical	☐Yes	☐No
gummer	☐Yes	☐No
resignate	☐Yes	☐No
cardination	☐Yes	☐No
pickard	☐Yes	☐No
verge	☐Yes	☐No
cranicle	☐Yes	☐No
gammonary	☐Yes	☐No
precocious	☐Yes	☐No
bought	☐Yes	☐No
ashill	☐Yes	☐No
swan	☐Yes	☐No
trill	☐Yes	☐No
derelict	☐Yes	☐No
ampled	☐Yes	☐No
acklon	☐Yes	☐No
ban	☐Yes	☐No
charlett	☐Yes	☐No
voluminary	☐Yes	☐No
rave	☐Yes	☐No
diversal	☐Yes	☐No
precious	☐Yes	☐No
postscript	☐Yes	☐No
castle	☐Yes	☐No
fastidious	☐Yes	☐No
safe	☐Yes	☐No
wookey	☐Yes	☐No
varney	☐Yes	☐No
maltass	☐Yes	☐No
murray	☐Yes	☐No
piccolotomy	☐Yes	☐No

Block D		
cartledge	☐Yes	☐No
obstinate	☐Yes	☐No
congulate	☐Yes	☐No
ostensibly	☐Yes	☐No
mastiphitis	☐Yes	☐No
refusal	☐Yes	☐No
steadily	☐Yes	☐No
scobie	☐Yes	☐No
prosaic	☐Yes	☐No
furrow	☐Yes	☐No
inhabitant	☐Yes	☐No
amiel	☐Yes	☐No
brind	☐Yes	☐No
elaborate	☐Yes	☐No
lone	☐Yes	☐No
morphew	☐Yes	☐No
guest	☐Yes	☐No
sprudd	☐Yes	☐No
incorpulent	☐Yes	☐No
haime	☐Yes	☐No
randle	☐Yes	☐No
albucolic	☐Yes	☐No
sanitary	☐Yes	☐No
menace	☐Yes	☐No
mourant	☐Yes	☐No
bluster	☐Yes	☐No
kearle	☐Yes	☐No
tomb	☐Yes	☐No
youde	☐Yes	☐No
asslam	☐Yes	☐No
scroll	☐Yes	☐No
lose	☐Yes	☐No
custom	☐Yes	☐No
tilt	☐Yes	☐No
seclunar	☐Yes	☐No
drab	☐Yes	☐No
gammage	☐Yes	☐No
powling	☐Yes	☐No
modesty	☐Yes	☐No
eventualise	☐Yes	☐No

Ich weiß, was das Wort heißt:

Block E		
practicate	☐Yes	☐No
motivise	☐Yes	☐No
pilbean	☐Yes	☐No
lucky	☐Yes	☐No
self-respect	☐Yes	☐No
raisin	☐Yes	☐No
compress	☐Yes	☐No
pocock	☐Yes	☐No
windle	☐Yes	☐No
churchlow	☐Yes	☐No
embarrassment	☐Yes	☐No
whereabouts	☐Yes	☐No
intuned	☐Yes	☐No
department	☐Yes	☐No
condick	☐Yes	☐No
shareholder	☐Yes	☐No
stephonise	☐Yes	☐No
interfere	☐Yes	☐No
scenery	☐Yes	☐No
mealing	☐Yes	☐No
discuss	☐Yes	☐No
tuber	☐Yes	☐No
thrift	☐Yes	☐No
orphan	☐Yes	☐No
squeak	☐Yes	☐No
fountain	☐Yes	☐No
hypodemical	☐Yes	☐No
possumate	☐Yes	☐No
cunnion	☐Yes	☐No
atribus	☐Yes	☐No
cordonise	☐Yes	☐No
pod	☐Yes	☐No
whaley	☐Yes	☐No
germ	☐Yes	☐No
mainwaring	☐Yes	☐No
foralate	☐Yes	☐No
cundy	☐Yes	☐No
remove	☐Yes	☐No
quote	☐Yes	☐No
cynist	☐Yes	☐No