THE DEAF LEARNING ENGLISH:

Learning environments and processes

Master's Thesis

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Erilaisia oppimisympäristöjä on onnistuneesti hyödynnetty oppimisen tukena jo useiden vuosien ajan. Tästä huolimatta ei ole olemassa tutkimuksia siitä, kuinka kuurot käyttävät oppimisympäristöjä englannin oppimiseen ja on vain joitakin tutkimuksia siitä, kuinka kuurot ylipäätään oppivat englantia. Tämän tutkimuksen tarkoituksena onkin selvittää, millaisia ovat kuurojen englannin kielen oppimisen prosessit etenkin oppimisympäristöjen kannalta. Tätä on selvitetty vertaamalla kuurojen kieltenoppimista kuulevien kieltenoppimiseen.

Tutkimus toteutettiin verkkopohjaisella kyselylomakkeella. Osallistujien kriteerinä oli, että he eivät olleet englantia äidinkielenään puhuvia, eivätkä alle 18- tai yli 40-vuotiaita. Kaiken kaikkiaan aineisto koostui 94 osallistujasta, joista 79 oli kuulevia ja 15 kuuroja. Osallistujille ei annettu tarkkaa määritelmää siitä, kuka on kuuro, joten he saivat määritellä itse, kokivatko he olevansa kuuroja vai kuulevia.

Kysely koostui useasta kysymyksestä, joilla kartoitettiin osallistujien arkipäivän englannin kielen käyttöä, sekä koulussa että vapaa-ajalla. Osallistujia esimerkiksi pyydettiin kuvaamaan, kuinka paljon he käyttivät arjessaan erilaisia medioita, ja kuinka paljon he olivat oppineet niiden kautta englantia. Heitä pyydettiin myös arvioimaan, miten hyödyllisiä erilaiset koulussa käytetyt tehtävätyypit ja muut koulun oppimisympäristöt olivat heille olleet, sekä kuvailemaan erilaisia oppimiseen joko negatiivisesti tai positiivisesti vaikuttaneita tekijöitä.

Tulokset osoittivat, että odotusten mukaisesti erilaiset informaalitkin oppimisympäristöt olivat hyödyllisiä englannin oppimisen kannalta. Odotetusti kuulevat myös hyötyivät kuuroja enemmän kuuloon pohjautuvista oppimisympäristöistä, kuten musiikista ja kuuntelutehtävistä. Kuurojen ei havaittu kompensoivan näiden oppimisympäristöjen puuttumista toisilla oppimisympäristöillä.

Tämän tutkimuksen tulokset ovat toivottavasti tulevaisuudessa hyödyllisiä etenkin kuuroille englannin kielen oppijoille sekä heidän opettajilleen. Lisätutkimuksen tarve on kuitenkin edelleen suuri.

Avainsanat - Keywords Deafness, language learning, learning environments, English as a foreign language

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1 INTRODUCTION

Inclusive teaching is quite widely discussed in today's field of teaching. Teachers should be able to consider every student's individual characteristics when designing teaching, which naturally requires knowledge of different learners. One area that has not been studied widely is learning a spoken foreign language as a person who cannot hear. What is it like to try to learn a spoken foreign language without the audial input? How do the processes of learning vary?

According to the Finnish Ministry of Justice (2019), there are approximately 10 000 – 14 000 Signing people in Finland, of which 4000 – 5000 are Deaf. The Finnish national core curriculum for basic education requires that in addition to their own mother tongue and Finnish or Swedish, every student must study at least one foreign language or the Sami language (Finnish National Agency for Education 2014: 125). This applies to deaf students as well. To this day, English is clearly the most popular choice for the foreign language (SUKOL 2019). There were no separate statistics for language choices made by the deaf, but it is safe to assume that English is similarly popular among the deaf as it is among the hearing.

English has become a global language used in more or less every country and society throughout the world. As a result, it has become a frequent part of people's everyday lives. Learning languages no longer happens in classrooms only, but in people's free time as well. More traditional learning environments, such as books and newspapers, have made way to more modern ones, such as videogames and the internet. Similarly, an increasing amount of this new media is accessible in English as well. Being Deaf does not mean one would not encounter English in, for example, in the internet in written form. Therefore, learning English is equally important to the Deaf as it is to the others.

The aim of this study is to find out how Deaf people learn English, specifically focusing on learning environments as a part of the language learning process. For example,

there have been a few studies on how music affects learning languages (see e.g. Fisher 2001; Ala-Kyyny 2012) where it was found that listening to music significantly helps in learning a foreign language. Music is one of the most important medias to the hearing people learning English, but it is often completely inaccessible to the Deaf. Is music replaced with another learning environment, or are none of the environments utilized by the Deaf as significant? To achieve this, a comparison between the Deaf and hearing learners is essential. However, as no previous comprehensive study covering all, or even several, of the learning environments used was found, the use of several learning environments in general had to be studied first. Therefore, in addition to presenting how the Deaf learn English, this study also aims to provide a more or less comprehensive view of the learning environments used by the learners of English in general.

The results of this study will hopefully provide a deeper understanding of the use of learning environments when learning English. In addition, I hope to provide new information about the process of learning English as a Deaf learner. This would be beneficial to both the Deaf learning English in the future, and their teachers. Knowing which learning environments are and have been utilized by deaf learners can help to aim the focus of one's learning process towards more beneficial media. Covering most used and beneficial learning environments will also hopefully be beneficial to future learners and teachers of languages in general.

This thesis begins with a background section, consisting of Chapters 2, 3, and 4. In Chapter 2, the definition of Deaf is discussed, followed by a presentation of characteristics of learning languages as a deaf person. An overview of the history of deaf language education in Finland is also provided. Chapter 3 discusses foreign language learning in general, beginning with the definitions of the essential terminology. English as a foreign language and some practices of teaching English are also discussed. Last, the concept of learning environments is introduced, especially focusing on different media as learning environments. Chapter 4 presents some of the previous studies on the topics of Finnish deaf learning English, and learning

environments in general. Chapter 5 explains the data and methods of this study in more detail. It is followed by Chapter 6, in which the results of the analysis are presented. The thesis finishes with Chapter 7 and 8, in which the previously reported results are discussed in more detail and then concluded.

2 THE DEAF AS LEARNERS

This Chapter begins by defining the key terms to use when discussing deafness and who is deaf in Section 2.1. Section 2.2 explains the process of language learning from a deaf point of view and whether or not being deaf affects it. Section 3.3 summarizes the history of deaf education in Finland.

2.1 Who is Deaf?

When discussing people who cannot hear, defining which terms to use is essential. Malm and Östman (2000) explain how, for example, the term *deaf and dumb* was used for centuries and, more or less, considered to be a valid one. However, the term was, and is, considered offensive by the Deaf community. The same applies to the term hearing-impaired ('kuulovammainen'), as it draws attention to the person being faulty in some way. Instead, 'Deaf' ('kuuro'), with a capital D, became the preferred term to use, alongside 'sign language user' ('viittomakielinen') (Malm & Östman 2000:10). Moreover, 'Deaf' refers to the cultural aspect, a certain group that identifies as Deaf regardless of the actual degree of their hearing loss, whereas 'deaf' refers to the condition of deafness (Padden & Humphries 2006: 1-2). Simply put, from a medical perspective, a person who cannot hear properly is called hard of hearing and a person who cannot hear at all is deaf (Korpijaakko-Huuhka & Lonka 2005: 6).

As Jamieson (2010: 377) points out, separating the deaf and hard of hearing, however, is not always as straightforward or simple. He goes on to say that alongside the use of modern technology, such as cochlear implants, new challenges for definitions have emerged. He explains how it is now possible for a person to function as a hard of hearing person (i.e. relying primarily on speech and listening when communicating) in one situation and as a deaf person (i.e. relying primarily on a visual approach to communicate) in another. A situation like this could occur, for example, when a person is normally using a hearing aid, but the device is currently malfunctioning or removed completely. In addition, functional listening ability is prone to change, especially as a

child with a hearing loss, which means that a person can be hearing or hard of hearing in one stage of their life, but deaf in another (Jamieson 2010: 377).

Furthermore, defining Deaf or hard of hearing can be seen as a matter of identity and personal preferences. As Israelite et al. (2002: 13) state, it is not enough to take into account the audiological perspective (i.e., people with mild and moderate hearing loss), but also those with moderately-severe, severe, or even profound hearing loss. In these cases, it is important to note whether or not the individual prefers oral communication and the use of residual hearing, even if they need speech reading, hearing aids or technical devices to communicate effectively (Israelite et al. 2002: 135). Thus, the group consisting of hard of hearing people is immensely diverse.

Cochlear implants and other hearing aids are, in part, one of the most significant factors making defining Deaf and hard of hearing complex. Holube et al (2014) describe how several types of hearing aids have been used historically. They list e.g. analog hearing instruments, which were adjusted manually to correlate with one's hearing level, and then move on to describe how they later developed, thanks to integrated circuit chip technology, and were digitally adjustable with specific programming devices or personal computers. The analog devices were quite clumsy, consisting of several parts, such as a microphone and an amplifier (Holube et al. 2014). Both performance and convenience of the implant have improved with modern technology, including body to ear-level devices, electrode design, and smaller size of the receiver-simulator (Mick et al. 2012).

Eisen (2012) points out that the first implanted hearing aid, which was invented in 1957 by André Djourno and Charles Eyriés, was not a success from the beginning. Even though the results were promising, despite being able to hear some sounds the patients were not, for example, able to hear speech well enough to understand. In addition, the implant was rather dangerous, e.g. causing infections due to the lack of appropriate hardware materials, and it often had to be removed shortly after the implantation (Eisen 2012). The Food and Drug Administration (FDA) approved

cochlear implants for adults in 1985 but waited until 1990 to approve implants for children (Gifford 2012).

Today's modern implants are considered safe and reliable, with only a few minor risks. A small part of patients have reported that their tinnitus has worsened after the implant, and a minority have experienced dizziness (Mick et al. 2012). The design, materials and assembly are still evolving, while new research is conducted and although device compatibility issues are rare, most patients will likely need a re-implantation during their lifetime, as their life expectancy exceeds the implant's (Cullen & Buchamn 2012). Determining candidacy for receiving a cochlear implant is a multifaceted process, in which medical, radiological, and psychological aspects need to be taken into consideration, in addition to audiologic evaluation and speech recognition testing (Gifford 2012). Nevertheless, the cochlear implants are the most common device used to (re)habilitate hearing loss (Cullen & Buchamn 2012).

Malm and Östman (2000: 12 - 13) add that not all sign language users are Deaf or hard of hearing. In addition to them, sign language can be used by their families, friends, spouses, and other people close to the Deaf person. A hearing child of a deaf adult or deaf parents most likely has sign language as their first language, despite not being deaf. Thus, they are sign language users, alongside of other people, who may be considered to be a part of the sign language community, such as interpreters of sign language (Malm & Östman 2000: 12 - 13).

In this study, in addition to 'hearing', the terms used are 'Deaf', 'deaf' (people/person etc.), and 'hard of hearing'. The term Deaf refers to a culture and people who identify themselves as Deaf, whereas deaf is a defining adjective for a group of people or a person with the condition of hearing loss. The term hard of hearing refers to everyone who is neither deaf, nor hearing. It should be noted that in this study the participants themselves identified with either being hearing or Deaf, and no strict definition of either term was provided. As the participants were free to choose the group they

themselves identified with, those who did not consider themselves to be hearing will be referred to as Deaf with a capital D.

2.2 Deafness and language learning

Language learning and language acquisition are generally two very different phenomena. Simply put, language acquisition occurs naturally, e.g. when a child absorbs a language from their parents without conscious effort. Language learning, however, is a conscious process aiming to get to know a new language. However, with deaf children the separation might prove to be more problematic. Hearing children of hearing parents can absorb the spoken mother tongue of the parents rather easily, but deaf children lack the ability to hear the speech of their parents. Therefore, to many deaf children acquiring even their first language can be a process of conscious learning. Due to these difficulties of separating language acquisition from language learning, in this study only the term 'language learning' will be used.

The process of language learning usually begins as early as before birth. Although a fetus cannot yet actively learn any language, the base for later learning is created while still in womb, as hearing is normally the first sense to develop (Korpilahti 2012). The fetus is able to react to different sounds from the 26th–28th pregnancy week on and can hear low sounds, such as the mother's heartbeat, in addition to being able to hear the mother's voice and therefore recognizing it from a group of women at the age of only a few days (Takala & Takkinen 2016: 9). A newborn, however, cannot yet analyse or structure the language in itself; in fact, the actual process of early sensations evolving into units of speech and language remains somewhat a mystery, but the correlation is undeniable (Korpilahti 2012).

However, as Takala and Takkinen (2016: 8-9) point out, the situation is drastically different if the child is hard of hearing or completely deaf. Similarly to hearing newborns, deaf and hard of hearing newborns seek communication and interaction. Hearing newborns will, for example, calm down when hearing their mother's voice. As auditory communication is limited with deaf and hard of hearing newborns, they

seek active looking, and mimic hand movements instead. This is also called 'manual babbling' (Takala & Takkinen 2016: 8-9).

Takala and Takkinen (2016) go on to explain that the time between birth and age of 5-6 months has been called non-goal-directed ('ei-tavoitteellinen') term, when it comes to communicating and language learning. The baby cannot yet take the surrounding world into account, making the communication based on its own emotions. In the early stages the baby can be an active communicator, whereas the parent usually mimics the baby's expressions. It is not until the later stages, when the parent interprets the baby's expressions as communication and responds, that it becomes reciprocal. This usually happens at the age of 8-12 months. Even though a deaf baby could not hear the parent's voice in these communicative situations, which often happens in some kind of physical connection or proximity, they can still feel the vibration caused by the parent's voice. Thus, they can "read" the communication even without the audial input (Takala & Takkinen 2016: 12-13). Takala and Takkinen do point out that in the early developmental stages, deaf and hard of hearing babies do produce babbling sounds similarly to hearing babies, even if they do not hear any response. Later on, however, the amount of babbling lessens if the baby does not receive any auditive feedback. This can lead to difficulties in the later stages of language learning (Takala & Takkinen 2016: 13).

Takala and Takkinen (2016) also describe how at the age of two, a native-speaking Finnish child's vocabulary consists of approximately 250 words and how after that the child learns about 10 words a day. At the age of 3-4 years the child can already produce commands, questions, and denials. By the age of 5 the child has learned all the different clause types in the Finnish language and by the age of 6 the child manages all the basic communication skills, such as answering questions and listening, in addition to knowing approximately 10 000 words. A deaf child growing up in a (partly or entirely) deaf family develops linguistic skills at the same rate as a hearing child. In fact, around the age of 18 months a deaf child usually knows more signs than their hearing peers know words. What seems to be the most vital factor is that the child is exposed to the

language during the era of natural language acquisition (Takala & Takkinen 2016: 14 - 18).

Similarly, the sooner a cochlear implant, or other hearing aid, is introduced, the greater the effects are for language learning abilities and the process of language learning in general (Houston & Miyamoto 2010). A child who has a significant hearing loss and does not have a cochlear implant starts their auditory language learning process later, which also leads to them having less time to practice their auditory skills. If it is planned that the child should primarily learn a spoken language, it is essential that the child has an early and consistent access to the sounds of speech (Dettman & Dowell 2010). If a child is born deaf and receives a cochlear implant at the age of 4 to 5 or later, their development of speech is often slow (Lonka 2012). However, it seems that sign language skills developed before receiving the cochlear implant have a positive effect on later spoken language learning (see e.g. Takkinen 2013a).

Of those who have received a cochlear implant, more than half use speech as a method of communication (Rainó 2012: 4). Their hearing, however, might not be effortless or easy, especially in noisy environments or group settings. Therefore, they might need other supporting arrangements as well, such as interpreters or certain acoustic decisions in the space they are in (Rainó 2012: 4). Generally, a person with a cochlear implant will most likely be able to learn spoken languages (e.g. in an educational setting) similarly to a hearing person, but there are times where some special arrangements are needed.

Deaf people are typically bilingual; they assimilate and use both the minority sign language and the majority spoken language, at least in its written form (Grosjean 2010). Even though most deaf children are born to hearing parents, and spoken language is likely the first language they are exposed to, it is often only their second language as they have only limited or non-existent access to it and they often acquire it in its written form during their school years, not in their early childhood (Plaza-Pust 2014). Studies have shown that competence in the signed first language benefits

learning the literacy of the second language (see e.g. Dubuisson et al. 2008), thus, learning literacy of the spoken language sometimes begins with improving the sign language skills.

Woll and Sharma (2008) describe how despite having a different, non-auditory and visual-spatial medium, sign languages are structured and processed similarly to spoken languages. The similarities include conventional vocabularies (i.e. learned pairing of form and meaning), duality of patterning (such as the lexicon, in which meaningless sublexical units form meaningful units, which in turn can be demonstrated by slips of the tongue or hand), productivity (i.e. possibility to add new vocabulary to both spoken and signed languages), and syntactic structures (e.g. both languages have the same word classes; nouns, verbs and adjectives) (Woll & Sharma 2008: 35 - 36). Therefore, when deaf people begin learning a second, spoken language, they can somewhat resort to the same patterns and methods used in their first, signed language. The same phenomenon can occur vice versa when an adult loses their ability to hear later in life and begins to learn a signed language.

According to Berent and Kelly (2008), Deaf learners acquire sign languages as effortlessly as a hearing person acquires a spoken one, but naturally learning a spoken language can prove difficult due to the lack of access. Berent and Kelly do suggest some compensatory mechanisms, such as lip-reading, reading of text, fingerspelling, and gestures, but they are not necessarily effective enough. For example, reading requires knowledge about the syntax and vocabulary of the language in which the text is written; therefore, it cannot effectively be used as a source for learning about syntax and vocabulary of the language learned via reading. However, e.g. some visual enhancement methods have proven to be beneficial when learning a second, spoken language (Berent & Kelly 2008).

There are also other difficulties deaf children can face during their education and language learning. For example, it has been found that on average, deaf students' reading (and writing) skills are not as good as their hearing peers' (Marschark. &

Hauser 2012). Spelling, a key factor in writing and reading, requires phonemic awareness, which the Deaf usually do not have (Brokop & Persall 2009), thus leading to lesser skills in both areas. However, the Deaf are equally capable of learning as their hearing peers, and the differences in their skills may be completely because of their lesser previous knowledge (Knoors & Hermans 2012).

2.3 History of deaf language education in Finland

Teaching languages to the deaf has been a field of controversial debate for decades. For a long time, sign languages were not recognized as languages at all; instead, signs were assimilated with gestures and signing was even thought to be harmful for learning spoken languages (Takala & Sume 2016). Salmi and Laakso (2005) describe the history of deaf education starting from the times of Carl Oscar Malm. Before Malm founded the first school for the deaf in Finland in 1846, the closest school was located in Sweden. Malm himself had studied in there and merged his learnings to the teaching in the new school; he used sign language while teaching and emphasized learning sign language, fingerspelling, and written language, aiming for bilingualism. In general, he stated that in his school the deaf could learn reading, writing, calculus, religion, and other sciences (Salmi & Laakso 2005).

Takala and Sume (2016) state that after Malm died in 1863, deaf education began to move towards oralism. The aim was no longer for the deaf to become all-round sophisticated, but to get them to work. Speaking skills were included in the curriculum in the 1870's, and in the 1890's the use of sign language in schools was banned altogether (Takala & Sume 2016). Salmi and Laakso (2005) describe how it was thought that while sign language was a useful first step in teaching, it was now time to move on towards spoken languages. As the deaf were expected to learn to speak, some succeeding better than others, they were divided into three categories (a, b, c) based on their skill levels. Signing was not allowed, but using gestures and hand movements were, in some cases, allowed (Salmi & Laakso 2005).

Even though the status of sign language was still unstable after it became an official subject in schools in 1993, using sign language was now allowed and many teachers started using it as well as they could, some even taking courses in it to improve (Salmi & Laakso 2005). Slowly bilingual teaching returned to the schools, slightly improving the academic results of the deaf, but the lack of qualified teachers and knowledge of how to teach literacy to those born deaf still had an impact on the deaf education in general (Takala 2004).

According to Takkinen (2013b), the University of Jyväskylä has offered some courses in sign language since the 1980's and since 1992 it has been an official, graded subject. In the mid-90's, the Basic Studies programme was formed, followed by the Subject Studies in 2008. In 2004 began the training of sign language teachers and it is also when the Finnish Sign Language received its status as an independent subject in the University. The University of Jyväskylä is still the only Finnish university offering Sign Language as a full subject (Takkinen 2013b). The university also hosts the Sign Language Centre, founded in 2010, which is responsible for the academic research and education in the field of sign languages in Finland (Takkinen & Puupponen 2017).

Nowadays, there are fewer deaf students in the schools targeted for the deaf and hard of hearing. With the increase in the use of cochlear implants, many deaf children now go to a mainly hearing school (Takala & Sume 2016). There are several aspects to consider when planning the teaching of deaf students. For example, the size and diversity of the group should be considered; if the group is either too big or too small, or it consists of both deaf and hearing students, it might prove difficult to individualise the teaching well enough (Bajkó & Kontra 2008). It is possible that the integration of deaf students to a hearing school can prove to be problematic in the future if their needs are not taken into account while planning everyday learning at schools.

Finnish National Agency for Education and their national core curriculum regulates the education of every Finnish student equally. The current Finnish national core curriculum (Finnish National Agency for Education 2014) states that in the teaching of

sign language users, strengthening their own identity and connection to their culture and the sign language community is emphasized. It also states that those who have sign language as their first language have the right to receive teaching in sign language, and hearing sign language users will receive sign language teaching if possible. Those who study sign language and literacy will also receive teaching in 'Finnish for Sign language users', or Swedish, if they study in a Swedish-speaking school. When it comes to foreign languages, including English, the Finnish national core curriculum describes it as part of the formation of a multilingual and multicultural identity. Communicational skills are also emphasized, and one of the aims is to provide the students with means to communicate and form networks using foreign languages, even globally (Finnish National Agency for Education 2014). However, the deaf learners and their goals of learning are not separated from the hearing learners'. It is difficult to determine whether or not the required level of communication skills has been achieved in the teaching of the deaf or hard of hearing learners so far, as the current situation has not been studied widely (see, however, Hanni 2007; Tapio 2013).

3 LEARNING A FOREIGN LANGUAGE

This Chapter discusses learning foreign languages especially from the point of view of deaf learners. In addition, the focus will be on English as a foreign language, although some statements are valid for other foreign languages as well. The Chapter begins with definitions of the essential terms of mother tongue / first language, second language, and foreign language (3.1), then moving on to describe the role of English as a foreign language in Finland (3.2). Chapter 3.3 presents some of the possible ways of teaching languages, aiming to provide a picture of how foreign languages have, could, and perhaps should be taught in practice. Due to the small number of previous studies on how languages are taught to deaf and hard of hearing learners, the Chapter will

describe language teaching practices in general. In Chapter 3.4, the concept of language learning environments is introduced and as many of the popular learning environments proved to be a part of a media, Chapter 3.5 will discuss media as a learning environment in more detail.

3.1 Mother tongue / first language, second language, and foreign language

Defining the mother tongue of a person belonging to a linguistic minority is not always simple. This is especially true when the minority language and majority language are different in their modality, as it often is for those belonging to the linguistic minority of sign languages. Skutnabb-Kangas (2008: 86) describes the different definitions of a mother tongue in four definitions, as seen in Table 1.

Table 1: Definitions of mother tongue according to Skutnabb-Kangas (2008)

Criterion	*Definition*
ORIGIN	The language learned first

IDENTIFICATION
  a. Internal (own)
  b. External (by others)
	a. The language one identifies with
	b. The language one is identified as a native speaker of by others

Competence	The language one knows best
Function	The language one uses the most

According to Skutnabb-Kangas (2008), defining mother tongue for linguistic majorities (such as Finnish-speaking people living in Finland) is relatively straight-forward, as the four definitions usually converge. They have learned Finnish first, are identified

as its users by themselves and others, know Finnish best and use it the most (Skutnabb-Kangas 2008: 86). For the linguistic minorities, however, defining mother tongue is usually more complex. For example, 90–95% of Deaf children are born to hearing parents (Skutnabb-Kangas 2008: 87). Skutnabb-Kangas (2008) goes on to describe how in an ideal situation the Deaf children would begin learning Sign language from a young age and receive most of their formal education in Sign language. This, however, would lead to them having a different mother tongue than their parents have, but also them identifying as native Sign language users. As Sign language is the only language the Deaf children can express themselves fully in (as expressing themselves fully in any spoken language would require the use of writing), it is justifiable to use a modified definition of competence when defining their mother tongue; their mother tongue is the language in which they can express themselves fully and with which they identify themselves (Skutnabb-Kangas 2008: 87).

Not every situation, however, is an ideal one. There are Deaf children who are not exposed to Sign languages from an early age and who do not receive their formal education in a Sign language. Is it possible to identify with a language one does not know? According to Skutnabb-Kangas (2008: 88), it is. The situation, however, might become more complex if one has to fight for their right to receive education in their mother tongue, when the definition of mother tongue is based on one's own identification (Skutnabb-Kangas 2008: 88).

The term 'first language' is often used alongside 'mother tongue'. Jokinen (2000) separates the two by using an example from the Deaf world: if a person learns sign language during their childhood from their parents, who are Deaf and use sign language either as a mother tongue or first language, sign language will be their mother tongue. On the other hand, if the person's parents do not have sign language as their first language or mother tongue but have learned it in their adulthood to communicate with their deaf child, sign language is only the child's first language. Jokinen does, however, acknowledge Skutnabb-Kangas' view of identifying with a language and agrees that even 'first language' can be replaced with 'mother tongue'

(Jokinen 2000: 80-81). In this study the term 'mother tongue' will be used, as the participants are free to state their mother tongue according to which they identify with.

Similarly to mother tongue, defining and separating second and foreign language is not always straightforward. Previously, a foreign language could be defined as a language that is not generally used in the everyday life or has no important tasks in a certain country, whereas a second language is used in the individuals surroundings in such a way that its use cannot be avoided (see e.g. Skutnabb-Kangas 1988: 109 - 111). Johnson (2013) acknowledges this as a possible definition but points out that not many bother to separate second and foreign language anymore.

Mitchell, Myles and Marsden (2013: 1) state that second language can be defined as any language that is not learned during childhood, i.e. as long as a language is learned after the first language, it can be called a second language. They consider foreign languages to be a subclass for second languages, as they believe the learning process is similar in either, and even foreign languages tend to be widely accessible in today's society (Mitchell et al. 2013: 1). Johnson (2013) agrees that this has become a general definition but finds it unfortunate as 'foreign' would be a more general word to use. Therefore, they have chosen to use the term foreign language (Johnson 2013: 12). As I both agree with Johnson and am more used to considering English as a foreign language, the term 'foreign language' is the one used in this study as well.

3.2 English as a foreign language in Finland

The Finnish national core curriculum for basic education requires that in addition to their own mother tongue and Finnish or Swedish, every student must study at least one foreign language or the Sami language (Finnish National Agency for Education 2019: 125). This applies to deaf students as well. To this day, English is clearly the most popular choice for the foreign language (SUKOL 2019). In 2012, 93% of Finnish people aged between 18 – 64 stated they know at least one foreign language, of which 9 out of 10 stated English as one of them (Niemi et al. 2014). In fact, the English language has become so popular that some people fear how it will affect the Finnish language (see

e.g. Nisula 2010; Salon Seudun Sanomat 2018; Isotalo 2019; Kokkarinen & Rauvala 2019).

Leppänen et al. (2009) conducted a study on how English is used in modern day Finland and how the Finnish people feel about English. Of the participants, 80% stated that they see or hear English in their everyday surroundings. Almost 60% felt English is at least somewhat important; women considered English to be slightly more important than men did, and young people considered English to be significantly more important than the older did. They also found out that the most common places for the participants to encounter English were on the streets, in shops, restaurants, transportation vehicles, and at work or home. In addition, when asked about their attitudes towards English teaching at school, 41% answered 'somewhat positive' and 48% 'extremely positive', whereas only slightly over 3% answered either 'somewhat negative' or 'extremely negative' (Leppänen et al. 2009).

In their study, Niemi et al (2014) got similar results. They found out that the Finnish adults not only know English the most, but their skill levels are higher in it than in any other foreign language. Only about 10% stated they do not know English at all, and another 10% stated they only know English a little. About a fifth felt their English skills are 'basic', and more than third felt they know English better than on just basic skill level. In general, women felt more competent than men. The level of education also played an important role, as in general, the higher education level the person had, the better they were at English. They also found out that the younger people were more skilled in English; of those aged under 35 years more than 40% were skilled users of English, whereas the number among those aged 55-64 years was only about 10% (Niemi et al. 2014). All in all, English has established a solid ground for itself and especially with the positive attitude of the young, it will likely remain popular in the future as well.

3.3 Practices of teaching English as a foreign language

Languages can be taught in several ways. For decades it has been known that interaction plays a crucial part in language learning, especially in second or foreign language learning (Hall & Verplaetse 2000: 1). Examples of interaction include corrective feedback (Ohta 2000), storytelling and wordplay (Sullivan 2000), repetition (Duff 2000), and general interaction between the students and the teacher (Takahashi et al 2000), among others. The balance of input and output is essential, as even when a student succeeds in receiving input, they might struggle with language output if they have not learned it previously (Hall & Verplaetse 2000: 4).

Salaberri Ramiro, Abdul-Salam Al-Masri, and Sánchez Pérez (2014) list different techniques for successful language teaching. They state that as language should be taught in a contextualized way, so should the teaching materials be contextualized and as authentic as possible. As today's world is multimodal, multimedia should be utilized in the classroom as well. In addition to multimedia providing different aspects to the target language (such as intonation, gesture, etc.), it also provides authentic evidence of the culture behind the language, via e.g. videos. They also state that different kind of technologies, such as using computers or browsing social media to learn a language are beneficial to the learning process. Some examples of these are also online pronunciation dictionaries, synonyms / antonyms / definition dictionaries, visual dictionaries, and rhyme dictionaries (Salaberri Ramiro et al. 2014).

Montijano Cabrera (2014) states that textbooks should not be entirely forgotten, even though new technology has provided valid options. Even though they are usually not able to cater every individual's specific needs, they provide a common ground for a group of teachers who otherwise would possibly have very different methods of teaching. The textbooks are also easy for the students to use even on their own (Montijano Cabrera 2014). In their study, Azzarro (2014) found out that students preferred traditional classroom situations, even if it meant having a high number of attending students, thus leading to less personal interaction. The students also preferred the printed materials to multimedia materials. They do, however, point out

that this might be due to the fact that the participants had history in traditional schools, hence they were used to using more traditional materials (Azzarro 2014).

McDonough, Shaw, and Masuhara (2012) take a more practical approach in explaining how several language skills can be taught. When teaching reading, the materials should be as authentic as possible. They should aim to broaden the students' knowledge on different types of texts, not only provide them with new vocabulary. In practice, the teacher can affect the students' reading skills by providing them with suitable materials and questioning / testing about their reading, eventually providing them some feedback. Listening skills include processing sound and meaning, context and knowledge, and perception skills. The rather traditional listening comprehension method (i.e. listening to a text, after which the teacher asks questions about it) is still widely in use, nowadays accompanied with e.g. pre-listening activities. Speaking skills include the ability to speak and phonetic skills. Pronunciation teaching may happen via feedback or correction, but some teachers prefer focusing on the content of speaking instead of how it is pronounced. Other speaking skills may be trained with reading aloud, oral assignments, or discussions. Writing skills can be taught either in a more controlled way (e.g. inserting a missing grammatical form, composing sentences, or joining sentences together to form a longer text) or a more freely (e.g. creating an essay from a given topic). Either way, teacher's feedback is expected on a written assignment (McDonough et al. 2012).

There have been some studies on how English is taught in Finland. For example, Tergujeff (2013) found that when teaching pronunciation, Finland mainly relies on more traditional methods, such as imitation, reading aloud and phonetic training. They also found out that approximately 98% of the teachers reported using textbooks in their teaching, and the students agreed saying that almost none of the exercises in the textbooks are skipped. Luukka et al. (2008: 64-65) support this by saying that since the textbooks are made to correspond to the curriculum, they are a great asset in language teaching. In 2006, Huuskonen and Kähkönen predicted that practising and

testing oral skills would become gradually more important in Finland in the future (Huuskonen & Kähkönen 2006).

As there are no studies on how English is taught to the Finnish Deaf in practice, it cannot be said for certain that this is how they are taught as well. However, it can be assumed that for example communication between the teacher and Deaf learner can be difficult especially in a classroom where there are both Deaf and hearing learners, as the teacher might not know sign language. Additionally, hearing and speaking skills might be problematic or even completely inaccessible for the Deaf, therefore the possible future emphasize on oral skills might not reach them sufficiently. It can, however, be expected that for example the use of technologies, authenticity of materials, and textbooks, are equally important factors to the Deaf learners as well.

3.4 Learning environments

Driscoll (2014) presents the concept of constructivism, which is a theory on how learners are active creators of new knowledge. Authentic contexts and meaningful goals are the base for learning, and the role of the teacher is to support the learner to accomplish what they could not accomplish on their own (Driscoll 2014). This shifts the focus of language learning away from the teacher and towards the individual learner. Therefore, learning is not restricted to the school environment, but instead, it depends on the surroundings of the learner.

In fact, education can be divided into three different types: formal education, non-formal education, and informal education. Dib (1987) defines formal education as systematic and organized education model that is structured and administered according to certain set of laws and norms. Formal education always requires the teacher, the students and the institution. When one or more of these requirements is missing, the education has turned towards non-formality. E.g. homework or other out-of-school assignments are part of non-formal education. Informal education does not correspond to any organized or systematic views of education, neither does it require an institute or a teacher. Examples of informal education are visits to museums,

listening to radio or watching TV, and reading different texts (Dib 1987: 1–6). In the sense, 'formality' refers to the extent in which the learning is done independently (Benson 2011: 10).

Furthermore, learning can occur in several different learning environments. The term 'environment' does not always refer to a physical environment, although it was so believed for quite some time. Taivassalo (2019) defines learning environments as comprehensive operational environments, that consist of different surroundings (workplaces, schools, workshops, networks, etc.), students, teachers (or other guides / co-operators), pedagogical thinking and methods of teaching, procedures, learning materials, and using of different tools, such as technologies. 'Learning environment' can refer to e.g. different platforms and media through which a language is acquired. These environments include wider concepts, such as social networks (see e.g. Palfreyman 2011) and social media (see e.g. Oksanen & Koskinen 2012), but also more specific concepts and media, such as music (see e.g. Ala-Kyyny 2012; Fisher 2001) and videogames (see e.g. Eskelinen 2019; Reinders 2012).

Multimodality has become an essential part of learning environments. It is thought to be important that both the teacher and the students receive new possibilities to organize the learning process (Mikkonen et al. 2012), which the use of different learning environments makes possible. Jarvis (2012: 16) points out that all learning begins with experience. As experience is something that happens to a person, learning is not always conscious. It is possible for an individual to learn English in their everyday life even without actively trying to improve their English skills.

When Kalaja, Alanen, Palviainen and Dufva (2011) asked students what they learned in school, the answer was grammar and vocabulary, as well as pronunciation, spelling, translation, reading, writing, speaking, listening, and culture. The students seemed to view formal language learning as a group of entities and rules that they were expected to master. Vocabulary was one of the most prominent aspects learned outside classrooms as well, but in addition, a notion of the usefulness of English language in

everyday life was brought up by the students. Another notion was that it is not necessary to know or use grammatically correct English for it to be useful (Kalaja et al. 2011: 51 – 53). As studies have shown that motivation is a key factor in learning languages (see e.g. Murray et al. 2011; Lasagabaster et al. 2014), different learning environments outside the classroom can provide a useful source for it. Sallila and Vaherva (1998: 9) stated that both informal and formal ways of learning have their own important skills and knowledge to provide. Therefore, learning outside classroom cannot be ignored.

3.5 Media as a learning environment

Media has always been closely connected to learning (Chan 2011: 1). However, with the constantly changing society and new technologies, the definition and use of media in learning has changed. Chan (2011) argues that the traditional definition of 'media' referring either to a channel or system of communication / information / entertainment, or an object or device on which information has been stored, is not enough anymore. In addition to more physical media, such as TV, newspapers, or even teachers, a more abstract definition is needed. As Ohm (2010, cited in Chan 2011) stated that 'media' should be divided either by the sensory channels addressed by the media, or the manner in which the conveyed information is coded, they formed new categories. These categories were auditive media, visual media and audio-visual media, which was then divided into three subcategories; verbal media, pictorial media and multicodal media (Ohm 2010, cited in Chan 2011).

As social media is becoming increasingly popular, it should be taken into account when discussing media. Obar and Wildman (2015) point out that due to the rapid change and development of different social media platforms, it is challenging to define what social media is. In addition, it is difficult to draw a line between what is and what is not social media, i.e. should for example a telephone be considered a social medium, as is it a technology enabling human contact? They do, however, manage to define social media with a few rules. Social media services are, at least at the moment, applications based on Web 2.0 internet. Their content is mostly user-generated, and

the individuals and groups using the media create profiles for themselves. This in turn allows them to develop social networks (Obar and Wildman 2015).

Luukka et al. (2008) studied how Finnish youth use different media in their everyday lives, both at school and during their free time. They found that while the youth did use print media at school, not many used it at home. For example, 67% reported reading fiction at school, but only 45% did so at home. Similarly, 64% read nonfiction at school, but only 44% at home. Audio-visual media vas visible especially in the free time, as 93% reported watching TV at home. At home 95% used their phones and 78% listened to the radio. The new types of media were also more used during the free time than at school. 60% reported using internet forums at home, while only 20% did so at school. Similarly, 56% reported playing (offline) computer games at home, while only 13% did so at school (Luukka et al. 2008). Their study, however, is already more than a decade old, and as technology evolves rapidly, it might not describe the current situation accurately. Still, it is clear that the youth is increasingly leaning towards newer types of media, while the traditional media is not used as much.

4 PREVIOUS STUDIES

This Chapter introduces some of the previous studies on the Deaf learning English conducted in Finland, and the successful use of learning environments. As there are not many studies on the Deaf learning English in Finland, Chapter 4.1 introduces three studies that were closely connected to the topic of this study. Chapter 4.2, on the other hand, introduces only a small part of the studies considering different learning environments, as it has been and continues to be a popular topic of studies, especially masters' thesis.

4.1 The Finnish deaf learning English

Learning English as a Finnish deaf person has not been studied widely, but there are some studies. Hanni (2007) studied the experiences of deaf learners, focusing on the formal teaching of English in Finland. There were seven participants in her study, all of whom were university students and therefore familiar with the fields of teaching and learning. Some of them, however, had studied in schools specifically aimed for the deaf, while others had studied among their hearing peers. Her study was conducted via semi-structured interviews and the aim of her study revolved around the personal experiences of the deaf while learning English, in addition to their perspectives of what teaching English for the deaf would ideally be like (Hanni 2007).

The participants of Hanni's (2007) study felt that the teaching of English had been mechanic, boring, and too tied to the textbooks. The teaching methods were not fit for non-hearing, which affected their learning negatively. The use of sign language interpreters as a learning method for English was criticized, whereas interactional teaching with variable methods was considered to be ideal. The participants also suggested using sign languages of English-speaking countries as a way of learning English (Hanni 2007).

Tapio (2013) was the first to study the use of English in the everyday lives of Finnish sign language signers. Her study was part of a bigger project called Beehive, in which

students from five different schools in two countries (Finland and Spain) came together to chat in English on a web-based internet platform. The participants in Tapio's study were from a Finnish Merikartano school, which at the time was a school for the hearing-impaired, i.e. the participants were deaf. This, however, did not stop them from participating in the online conversations. Upon further inspection, she found that the students used English in similar web-based settings outside classrooms as well (Tapio 2013).

Tapio (2013) also found out that the learners did not realize how actively they were using English in their everyday lives, as well as were consciously unable to connect the informal English with the formal English at school; i.e., they did not realize how beneficial the informal English was in learning the language. Tapio also found out that even though there was no lack of resources for the sign language users to learn languages (such as using technological tools, online-messaging, and fingerspelling English words), they were not effectively used in the formal English teaching (Tapio 2013).

Later, in 2017, Tapio went back to the data of her previous study from 2013. This time she looked into one of the participants, 'Hanna', in more detail. At the beginning of the original study, Hanna described herself as someone who struggles to use English and only uses English at school. During the interviews, however, she realized that despite not hearing any spoken English, she did encounter English in her everyday life outside school as well, and she did indeed manage to use English sufficiently while doing so. This is what Tapio calls "a moment of self-revelation" and sees it as an important turning point in the process of learning languages (Tapio 2017).

In addition to Hanni's and Tapio's studies on the deaf, Isomöttönen (2003) studied how hard of hearing learners of English explain their failures and successes in the process of learning English. She gathered her data from 11 hard of hearing learners of varying backgrounds, but who all had studied English in Finnish schools. Her study was narrative, i.e. she asked the participants to write their life story with the help of

some trigger questions, such as "What was it like to study English in primary school, lower / upper secondary school?" and "What was hard / easy?" The results showed that hearing was considered a relevant factor in failing in learning or using English. It was not, however, considered a relevant factor in successes, where the most common explanations were related to e.g. school or talent. It was also an interesting notion that in the explanations of both failures and successes the learner/user was constructed as passive instead of active, drawing responsibility away from the learners themselves (Isomöttönen 2003).

Based on these studies it seems that the practices of teaching English to the deaf are outdated, or at least often considered boring or inefficient by the learners. In addition, the learners might not always realize just how active they are as users of English, or how much English is available despite not being able to utilize spoken English to the same degree. They also might see their lack of hearing as a restriction for learning languages.

4.2 Learning environments

The use of different learning environments has proven to be beneficial in several ways. For example, according to Rongas and Honkonen (2016) social media provides the students with a variety of different methods to interact and communicate, which happens by using a language. New technologies also make watching streaming, receiving visual input, and playing games easily accessible to learners (Rongas & Honkonen 2016). As most of these actions require language, often specifically English since many of international streamers and online games are in English, learning is effortless and enjoyable.

Pyörälä (2000) studied drama as a means of language learning. Her data was gathered from two high school courses, consisting of the course plans, the teachers' diaries of the course, and the feedback form given to the students at the end of the course. She found that using drama in English language learning improved especially spoken

language skills and communication, as well as the courage to speak English (Pyörälä 2000).

Linnakylä (2010) explored the effects of English texts and literacy on the language skills. She asked all of the eighth graders of one school, 78 students in total, to answer a questionnaire about how they utilize different English texts outside school and how they have benefitted from reading them. Moreover, 10 students were selected for more detailed interviews. The results showed that the most interesting and beneficial texts were multimodal, entertaining, and possibly social. Not many students read traditional texts, but books provided skills in writing and grammar (Linnakylä 2010).

Ala-Kyyny (2012) studied the correlation between listening to English music and learning English language. She gathered the data from 97 high-schoolers via an online questionnaire, which consisted of questions about e.g. their habits of listening to music and their experiences on how listening to English music during their free time has benefitted their learning of the language. The effects of music were considered to be rather high on pronunciation, listening comprehension, and learning vocabulary or phrases. She also found that those who were not very competent in English did not pay attention to the lyrics as much, nor did they consider the benefits of the music as great as those who were more competent. All in all, the benefits of listening to music were clearly visible and variable (Ala-Kyyny 2012). Lappi (2009) had similar results, as he found that listening to music can help learning listening comprehension, pronunciation, vocabulary, grammar, and culture, in addition to acting as a motivator to learn English in order to understand the lyrics.

Koivumäki (2012) focused on how the internet affects learning English. He interviewed two adolescents on their experiences on how has their use of the internet during their free time affected their English skills. The participants felt that learning English through the use of internet was natural and efficient, due to the constant presence of internet in their everyday lives (Koivumäki 2012). Naturally no broader

conclusions can be drawn from such a small sample, but internet can undeniably be an important mean of language learning.

Rajala (2019) looked into digital gaming as a means of learning English. He asked 48 students from grades 4 to 6 to fill in a questionnaire, in which there were questions about their habits of gaming, their grades in English, and their opinions on learning English from games. The students mostly agreed that games were useful both in learning the language and motivating them to learn further. He did find that the average English grade of those who played a lot was higher than of those who did not play as much (Rajala 2019). Eskelinen (2019) interviewed seven university students who played single-player video games actively and found that, for example, they learned vocabulary via playing and in some cases even got to practice producing the language while gaming.

While these studies are just examples of different studies conducted on the topic of learning environments and some of them are rather small, they do demonstrate a positive relationship between modern learning environments and language learning. It is obvious that utilizing different learning environments and media already present in the everyday lives of language learners leads to positive outcomes on their language skills.

5 DATA AND METHODS

This Chapter presents the data and methods used in this study. It begins with the research aim and questions, followed by a more detailed description of the participants of this study and the questionnaire used. Lastly, the methods of analysis will be discussed.

5.1 Research aim and questions

The aim of this study is to examine the learning environments utilised by the Deaf and hearing learners of English as a foreign language. Via studying different learning environments an understanding of the most common media utilized and the benefits of these media in language learning processes is hopefully achieved. The research questions are:

1) How do learners of English use the language in their everyday lives?
   a) What kind of learning environments do they use during free time? How about in formal education?

The first question aims to outline the use of learning environments in general, both at school and during free time. The goal is to compose a list of learning environments that are both utilized by and beneficial to the learners of English in general. As there have been quite many studies on different learning environments, it is expected that the learning environments studied previously (e.g. listening to music and playing video games) will be somewhat present in the everyday lives of the participants. Furthermore, based on previous studies it is expected that the use of the environments in the learners' everyday lives will benefit their language learning, when the language learned is present.

2) Is there a difference between Hearing learners and Deaf learners of English when it comes to the processes, methods and environments of learning English?

a) Which factors have (positively or negatively) affected their learning process in their own experience?

Question 2 focuses on the comparison between the Deaf and hearing learners of English. It aims to find out if the lack of audial input affects the use of learning environments and the process of learning English. These effects, however, will only be studied based on the participants' own perceptions of their learning processes, as the learning process in itself was not studied in this study. The expectation is that some differences will be visible. In addition, their own opinions of what is/was beneficial or harmful for their learning are gathered.

5.2 The questionnaire

The questionnaire was an online questionnaire created on the Webropol-platform. It consisted of 16 questions in total, including both open-ended questions and closed multiple choice questions. Even though multiple-choice questions have been found to produce less varied answers, they make it easier to compare the answers (Hirsjärvi et al. 2009: 201). As comparison is one of the key elements of this study, multiple choice questions were seen suitable. The open questions made it possible for the participants to voice their own thoughts and experiences, and to add information, e.g. if they felt they had benefitted from a learning environment that was not mentioned in the questions to begin with. The questionnaire was both in Finnish and English to ensure that even those with lower English skills could participate, broadening the variety of the data. The benefit of using English as well was that if the participants wished, they could answer the questionnaire with the same language that is used in the actual study. The entire questionnaire can be found in the Appendix 1.

The questionnaire begun with basic background questions. First they were asked to state whether they are Deaf, hearing, or hard of hearing. However, no definition of either term was provided and thus the participants answered based on their personal identity (see Section 2.1 above). This question was used as the base for the main comparison between different groups of learners. Next they were asked to state their

mother tongue, partly to make sure none of the participants had English as their mother tongue and partly to further separate e.g. those hard of hearing who use Finnish as their mother tongue from those who use Finnish Sign language.

The participants were also asked to provide their age (18 –20, 21 –25, 26 –30, 31 –35 or 36 –40), gender (male, female, other or "Don't want to say") and their highest completed degree. This was done to be able to take into account the possible effects of different backgrounds of the participants. E.g. Niemi et al. (2014) found that those who had higher education levels were also more competent in their English skills. In addition, they found that women were more competent than men (Niemi et al. 2014: 139-140). Their findings were based on self-evaluation and not any objective criteria of language skills, similarly to how the participants of this study were free to state e.g. whether or not they consider themselves to be active users of English or not.

To begin charting the participants' use of English, they were asked two general questions of their use of English. First, they were asked how often they use English in their everyday lives, with the answers varying from 'Every day' to 'Less frequently (than once in a month)'. The purpose of this question was simply to get a general idea of how much the participants use English. Next, they were asked with whom they use English; family, friends, alone, or with strangers. The option 'Someone else, who?' was also provided in case they used English with someone who was not listed in the original options.

The first longer section of the multiple-choice questions focused on the use of English during free time and was split into two. The participants were first provided with a list of different media in which they could encounter English, and then asked how much they use English via said media in their everyday lives on average. To do this, the Likert scale was used with the options ranging on a scale of 1 to 5, one being 'Not at all' and five 'A lot'. The second part of this section had the same list of media, but this time the participants were asked to evaluate how much they had benefitted from said media, i.e. how much they had learned English through them. Similarly to the

first part, Likert scale ranging from 'Not at all' (1) to 'A lot' (5) was used in this second part as well. Using the Likert scale made it possible to compare the results later, as they were in a numeric formatting. There was also the option to add a used and / or beneficial media if the participant felt one was missing, but it was eventually rarely used.

The list used in the first section contained 12 different media that were selected based on previous studies about learning environments, such as social media (see e.g. Rongas and Honkonen 2016), literacy (see e.g. Linnakylä 2010), music (see e.g. Ala-Kyyny 2012; Lappi 2009), internet (see e.g. Koivumäki 2012), or video games (see e.g. Rajala 2019; Eskelinen 2019). Some of them were chosen because they had been proven to be a context in which to discover English, even if there were no studies of them as a learning environment as such. An example of this was the last media, 'environmental objects', picked from Leppänen et al. (2009: 51). Therefore, even though the question itself did not refer to these media as learning environments, they are treated as such in this study.

The second section focused on English in an educational setting, i.e. at school. They were first asked how long ago was the last time they studied English in a school setting, or if they still do. The purpose of this question was to find out if the time of one's school years had an impact on e.g. which methods were used during their years at school. Next, they were again provided with a list, this time consisting of some commonly used exercise types at schools, such as listening comprehension, vocabulary or grammar exercises, and written assignments. As technology, music, and movies / videos were proved to be a possible channel to learn English in the previous studies of learning environments, they were included in the school section as well. Based on this list they were asked how much they felt they had benefitted from the use of these exercise types. Similarly to the first section, a Likert scale was used, ranging from 'Didn't benefit at all' (1) to 'Benefitted a lot' (5). Unlike the first section, however, the participants were able to leave the answer blank if the exercise type was

not used at all. Again, they were able to add their own comments if they felt there was something missing from the list, but it was rarely used.

The questionnaire concluded with three open-ended questions, first of which was whether or not the participants considered themselves to be active English users and why. This was asked in order to examine how the learners see themselves as users and learners of English. To further map out the journey of learning English, the participants were then asked to describe when and where they remember first encountering English. This would prove insight into e.g. where the participants saw English before beginning learning it at school. Lastly, they were asked which factors they thought were beneficial or harmful to their English language learning process, both during free time and at school. This was an important question, as it is strongly related to research question 1b. I felt it was extremely important to use open-ended questions in addition to the closed ones, as they allow the participants to express their own thoughts more freely (Hirsjärvi et al. 2009: 201).

5.3 The participants

The search for participants started 25th of November 2019, when the online questionnaire was sent to three different email lists of the University of Jyväskylä. One of these was the list for the English subject, second was the Finnish Sign Language's list, and the third was Lingviestit, which is a list for the organization for all the language and communication students at the University of Jyväskylä. The following day the questionnaire was posted in a Facebook group of approximately 2300 members, aimed for Finnish people who use sign language in their everyday lives. However, not all of them are Deaf or hard of hearing. In addition to posting the questionnaire to a non-University related Facebook group, to further avoid the participants only being from the same University, I asked my friends and family to forward the questionnaire to people they know.

Based on the number of answers received immediately after sending the questionnaire to the mailing lists, it reached a large number of people fast. It is not possible, however,

to know how many eventually saw it, therefore it is not possible to know the percentage of those who answered in it versus those who ignored it. Similarly, it is not possible to track the number of people reached via the Facebook group or personal contacts, as people might have forwarded it to many other people in addition. Thus, the percentage of those who actually answered upon receiving the questionnaire is not known.

When beginning the search for the participants, my goal was to gather at least 20 people from each group (hearing, Deaf, and hard of hearing). However, gathering a sufficient number of Deaf and hard of hearing participants proved to be rather difficult. Eventually my data consisted of 99 participants, of which 79 were hearing, 15 were Deaf, and only 5 were hard of hearing. This meant that two of the groups (Deaf and hard of hearing) turned out to be significantly smaller than what the goal was, especially the hard of hearing. Therefore, it was decided that this study would focus mainly on the differences between the Deaf and hearing learners, whereas the hard of hearing learners, while still somewhat present in the study, would not be used in the comparison.

The criteria for the participants was as follows:
1) Aged between 18 and 40 years old
2) Having studied English as a foreign language, i.e. non-native speaker of English

The criteria for age is based on two factors: 1) being at least 18 years old, as people have at that age usually completed their entire basic education and, as adults, are more capable of analysing and reflecting their own experiences as learners; 2) not being over 40 years old, as I am willing to study the somewhat current situation of learning English, but at the same time make it possible to compare different age groups and their usage of learning environments. The maximum age of the participants was raised a few times in order to gain more participants, as finding a sufficient number of Deaf participants proved to be challenging. As the aim of this study is to examine learning

English as a foreign language, it would not make sense to gather the data from people who may have learned English as something else (e.g. second language) or not at all.

After eliminating the hard of hearing from the data, there were 94 participants left. Of these 84% (n = 79) were hearing and 16% (n = 15) were Deaf. Finnish was the mother tongue of 81% (n = 76), whereas 13% (n = 12) had Finnish Sign language as their mother tongue. 6% (n = 6) stated that their mother tongue was something else, or they were bilingual. Two out of the three bilinguals had both Finnish and Finnish Sign language as their mother tongue. To protect the anonymity of the participants with other languages as their mother tongue, the languages are not listed.

Table 2 represents the distribution of the participants' ages. As it can be seen, the Deaf participants were somewhat older than the hearing participants. None of the Deaf were younger than 26 years old, but there was at least one hearing participant in each age group. The biggest group for the Deaf was ages 36–40 (53%), whereas most of the hearing were aged 21–25 (44%) The increased use of cochlear implants and other hearing aids might have had an effect on this, as e.g. the ages of the hard of hearing (not visible in the table) was more varied, from ages 21–25 to 36–40.

Table 2: The age groups of the participants

	Hearing	Deaf	Total

	n	%	n	%	n	%
18 - 20	14	18%	0	0%	14	15%
21 - 25	35	44%	0	0%	35	37%
26 - 30	24	30%	4	27%	28	30%
31 - 35	5	6%	3	20%	8	9%
36 - 40	1	1%	8	53%	9	10%
Total	79		15		94	

As can be seen in Table 3, most of the participants were female (n = 76), both in the Deaf and hearing groups. There were two participants who either did not want to state their gender, or whose gender was other than male or female.

Table 3: The genders of the participants

	Hearing		Deaf		Total	
	n	%	n	%	n	%
Female	64	81%	12	80%	76	80%
Male	13	16%	3	20%	16	17%
Other	2	3%	0	0%	2	3%
Total	79		15		94	

The differences between the highest completed degrees were more diverse, as can be seen in Table 4. None of the participants had only completed their basic education, but otherwise there were participants in every degree group. Due to the young age of the hearing participants, it was not a surprise that most of them had only completed their high school degree.

Table 4: The participants' highest completed degrees

	Hearing		Deaf		Total	
	n	%	n	%	n	%
Basic	0	0%	0	0%	0	0%

education						
High school	36	46%	2	13%	38	40%
Vocational school	7	9%	2	13%	9	10%
University of Applied Sciences	4	5%	5	33%	9	10%
Bachelor's Degree (University)	22	28%	2	13%	24	25%
Master's Degree (University)	10	13%	4	27%	14	15%
Total	79		15		94	

5.4 The methods of analysis

This is a comparative study between different groups of learners of English. Vilkka (2007) describes how the aim of a comparative study is to understand a phenomenon further by comparing the differences of at least two subjects. It is typical for a comparative study that a hypothesis is set (Vilkka 2007: 21). Despite this, no hypothesis for this study was set, as both quantitative and qualitative methods will be used due to the nature of the questionnaire. This method combining the two different methods is called the mixed methods research (MMR) approach and is used to study a subject further in a more diverse manner than what could be achieved using only either quantitative or qualitative method (Creswell 2009). However, it is assumed that there are some differences between the Deaf and hearing learners of English, as their abilities to receive audial English input differ.

A quantitative method is typically used to answer the questions *How many?, How much?* and *How often?* and the data is in a numeric form, in addition to the results being presented in a numeric form as well (Vilkka 2007: 14). In this study, the closed multiple choice questions 8 (use of a media), 9 (benefits of said media), and 12 (use and benefits of a certain exercise type at school) were analysed using a quantitative method. When

comparing the Deaf and hearing learners, the numeric results of these questions were statistically analysed using the SPSS-program, more specifically the Mann-Whitney U test. According to Greene and D'Oliveira (2005), the Mann-Whitney U test should be used when two independent groups are compared. In addition, the test scores are measured as ordinal data and therefore can be ranked (Greene & D'Oliveira 2005: 39). Both of these criteria are met as regards the aforementioned questions in this study, hence this test type was chosen.

For the open questions of the study, the method of qualitative content analysis was used, including quantifying the data when seen necessary. According to Tuomi and Sarajärvi (2018: 78), qualitative content analysis is not guided by a theoretical or epistemological positioning, but many of the theoretical or epistemological points can be applied to it rather freely. They go on to explain how the qualitative content analysis can be further divided into three different methods of coding; theory driven, data driven, and theory-guided coding. If the analysis is driven by theory, it leans on a certain theory or model, which in turn serves as a base for e.g. the concepts that are the focus of the study. In data driven analysis the key concepts emerge from the data instead of any theory, adapting to the aim of the study. Unlike in the theory driven method, the concepts are not decided on in advance, but rather drawn from the data. The third, theory guided coding method combines these two in the sense that the concepts are drawn from the data, but previous knowledge guides the process (Tuomi & Sarajärvi 2018: 78-82).

Although the open-ended questions of the questionnaire were formed based on previous research, no certain theory was used, nor did it guide the data towards any previously set analytical categories. Instead, the key concepts were drawn from the data. Therefore, the method chosen was data driven content analysis. Miles and Huberman (1994, cited in Tuomi & Sarajärvi 2018) describe the process of data driven analysis as three-step program, which begins with reducing the data, then clustering it, and finally abstracting it to create theoretical concepts. In practice, the answers to the open-ended question 16 of this study were first reduced to simple phrases or

keywords. These phrases were then combined to form several subcategories (such as 'Feedback' and 'Social contact'), which were in turn combined to form three main categories; 'Teaching styles', 'Motivation', and 'Using the language'.

The size of the sampling is not essential in qualitative research, as it does not aim towards statistical generalization (Tuomi & Sarajärvi 2018: 73). On the other hand, according to Vilkka (2007: 57), in quantitative research the bigger the sampling, the better. Vilkka does, however, point out that the sampling is representative when the proportions of different groups correlate with the proportions of the groups in the population (Vilkka 2007: 56). In this study, the sampling is rather unbalanced in the sense that there were 79 hearing participants compared to 15 Deaf and 5 hard of hearing, as despite several efforts to gather more data the samplings of Deaf and hard of hearing remained unfortunately small. However, this does represent the population in general, as of the approximately 5,5 million people living in Finland approximately 10 000 – 14 000 are Signing, of which only 4000 – 5000 are Deaf (Finnish Ministry of Justice 2019).

6 FINDINGS

This Chapter presents the findings of the analysis. Chapter 6.1 focuses on research question 1, the use of English in the everyday lives of learners. It is further divided into two Sections, the first focusing on the use of English in free time, and the second on the use of English at school. Chapter 6.2 focuses on research question 2, comparing the Deaf and hearing learners. It is divided into two as well, first discussing the different ways of using the learning environments, and then the different factors affecting the language learning process both in free time and at school.

6.1 English in the everyday lives of the learners

The first research question aimed to find out how learners of English use the language in their everyday lives and what kind of learning environments they use, both in their free time and at school. This Section first discusses the use of English in general, e.g. the routines of how often and with whom the participants used English. It is then divided into three subsections, the first focusing on the use of English in free time and the second discussing the use of English at school. The third discusses the factors affecting their English language learning either positively or negatively.

Questions 6 and 7 charted how often and with whom the participants use English. The results can be seen in Tables 5 and 6.

Table 5: The frequency of English use

	N	%
Every day	80	85%
A few days a week	8	9%
Once a week	1	1%
Once in two weeks	0	0%
Once in a month	1	1%
Less frequently	4	4%

Table 6: With whom English was used

	N	%
Family	16	17%
Friends	72	77%
Alone	68	72%
Strangers	50	53%
Someone else, who?	23	25%

The clear majority of the participants stated that on average they use English 'every day', and only a few used English less than on few days a week. Most of the participants used English either with their friends or alone but using it with strangers was also common. Using English with their families was less common. Approximately one quarter of the participants stated that they use English with someone else as well. These answers included their spouses (n = 6), teachers or academic surroundings (n = 7), at work with clients (n = 3) or colleagues (n = 2), roommates (n = 2), and their students (n = 1). Two participants also stated that they use English while watching TV or reading, or in the internet, which could be placed under the 'Alone' category. It should be noted that the participants were free to choose as many options as they wanted.

Question 14 aimed to find out whether or not the participants felt they themselves were active users of English. As the yes/no-nature of the question and the request for

reasoning ("Why, why not?") provided both a clear answer and room for different themes to emerge, it was possible to quantify the answers. The self-evaluation aspect in the question could have proved to be slightly problematic, as the participants had different standards for what an active user of English is. For example, one participant felt that they were not an active user of English despite using it daily at their workplace, since they did not feel their English skills were competent enough. However, as the question was about how they see themselves, not an objective truth, it was not a problem. The answers were divided into three categories: yes, no, and ambiguous. Even answers such as 'quite active' or 'somewhat active' were counted as a yes, and vice versa. The results can be seen in table 7.

Table 7: Activeness as English users

	n	%
Yes	80	85%
No	11	12%
Ambiguous	3	3%

The ambiguous users felt they were 'passively active'. One of the ambiguous users described how they are actively avoiding situations where they would have to speak but have no problem in e.g. listening to someone speak English. Another said that even though English is present in their everyday life, they always prefer using Finnish over English, if possible. The third said they rarely discuss with people in English, but quite actively watch YouTube-videos, or see, read, or write English in social media. In addition, of those who did not consider themselves to be active, almost all (82%, n = 9) did mention either using English at least a little (e.g. listening to music in English, or having to use English at school) or that they do encounter English in some situations. These results are in line with those of question 6, as a remarkable majority both use English every day and do consider themselves active users.

6.1.1 Use of English in free time

The learning environments used by the participants during their free time were studied from two different viewpoints, the amount of use and the benefits to language learning. Table 8 represents the use of different media as learning environments, presenting how the participants answered from 1 to 5, in addition to the mean and median of the answers.

Table 8: Use of different media

	1 = Not at all	2	3 = Some but not much	4	5 = A lot	Mean	Median
Television, series	3 (3%)	15 (16%)	12 (13%)	22 (23%)	42 (45%)	3.9	4
Movies	7 (7%)	18 (19%)	29 (31%)	20 (21%)	20 (21%)	3.3	3
Video games	36 (38%)	18 (19%)	10 (11%)	7 (7%)	23 (24%)	2.6	2
internet	2 (2%)	4 (4%)	11 (11%)	32 (34%)	45 (48%)	4.2	4
Videos, streams	7 (7%)	7 (7%)	16 (17%)	25 (27%)	39 (41%)	3.9	4
Social media	1 (1%)	7 (7%)	15 (16%)	25 (27%)	46 (49%)	4.1	4
Music	11 (12%)	7 (7%)	3 (3%)	19 (20%)	54 (58%)	4.0	5
Literature	9 (9,6%)	20 (21%)	23 (24%)	25 (27%)	17 (18%)	3.2	3
Traditional media	12 (13%)	40 (43%)	25 (27%)	15 (16%)	2 (2%)	2.5	2
Advertising	4 (4%)	22 (27%)	38 (40%)	27 (29%)	3 (3%)	3	3
Applications	28 (30%)	25 (27%)	17 (18%)	11 (12%)	13 (14%)	2.5	2
Environmental objects	4 (4%)	26 (28%)	36 (38%)	19 (20%)	9 (10%)	3	3
Total	124	218	235	247	313	3.4	-

All in all, the participants used these media quite a lot. The most common option answered was 5 ('A lot'), while 1 ('Not at all') was the least common. None of the media had a mean below 2.5, although in video games and applications most of the participants answered not using English in them at all. The mean of all the answers was 3.4. The median answers varied from 2 to 5, with 4 as the most common median answer.

Out of all the media, internet and social media were used the most, with music, television/series, and videos/streams following close behind. Of these, music was used by over half of the participants, and the others by approximately a half, in their everyday lives a lot. Music also had the highest median, meaning that the typical answer for music was 'a lot'. Traditional media, applications, and video games were used the least. Some of the media were used in a more varied manner than others. For example, more than third of the participants stated they do not play video games at all. On the other hand, a quarter of the participants stated they play video games a lot. The opposite phenomenon is visible in for example social media, where approximately half of the participants stated using it a lot, with only 1% stating they do not use it at all. Table 9 presents the benefits of these media.

Table 9: Benefits of different media

	1 = Not at all	2	3 = Some but not much	4	5 = A lot	Mean	Median
Television, series	3 (3%)	5 (5%)	12 (13%)	28 (30%)	46 (49%)	4.2	4
Movies	3 (3%)	8 (9%)	17 (18%)	30 (32%)	36 (38%)	3.9	4
Video games	32 (34%)	7 (7%)	11 (12%)	17 (18%)	27 (29%)	3	3
internet	1 (1%)	7 (7%)	20 (20%)	38 (37%)	33 (34%)	3.9	4
Videos, streams	7 (7%)	14 (15%)	22 (23%)	24 (26%)	27 (29%)	3.5	4
Social media	7 (7%)	8 (9%)	23 (24%)	27 (29%)	29 (31%)	3.7	4
Music	13 (14%)	9 (10%)	12 (13%)	27 (29%)	33 (35%)	3.6	4
Literature	5 (5%)	11 (12%)	17 (18%)	23 (24%)	38 (40%)	3.8	4
Traditional media	12 (13%)	28 (30%)	30 (32%)	18 (19%)	6 (6%)	2.8	3
Advertising	19 (20%)	40 (43%)	20 (21%)	9 (10%)	6 (6%)	2.4	2
Applications	31 (33%)	24 (26%)	18 (19%)	16 (17%)	5 (5%)	2.4	2
Environmental objects	20 (21%)	33 (35%)	25 (27%)	11 (12%)	5 (5%)	2.5	2
Total	153	194	227	268	291	3.3	-

Similarly to the use, option 5 ('A lot') was answered the most, and option 1 ('Not at all') the least. The most common median answer was, again, 4. However, the range of median answers only varied from 2 to 4, meaning that none of the answers had 'A lot' as their typical answer. As even the lowest median of the answers was 2.4, at least some English was learned through all of these environments. The mean of all the answers was 3.3, i.e. almost identical to the mean of the use of media.

Television/series was considered the most beneficial media for learning English, with movies, literature, and music following close behind. Television/series, movies, videos/streams, internet, social media, and literature were clearly considered more beneficial than not. For example, 40% of the participants stated they had learned a lot of English through literature, while only 5% stated they had not learned English through it at all. Advertising, applications, and environmental objects were considered the least beneficial, with traditional media only slightly more beneficial than them. Video games were also rather close to the bottom, although it was more varied than the other least beneficial media. For example, only 5% considered applications to be really beneficial, i.e. they had learned a lot of English through them, and 33% had not learned English at all, whereas 27% stated they had learned a lot of English through video games, but 34% stated they had not learned English at all

As neither the use nor the benefits of a certain learning environment tell much alone, it is profitable to look at these two aspects together, as is done in Figure 1. The numbers in the figure represent the average answers, i.e. the mean of the use of television / series was 3.9 and that of benefit was 4.2, etc. These results can be divided into two categories; those that were used more than they were beneficial, and vice versa. However, as all of the media were both used and considered beneficial at least to some extent, the differences are not, in most cases, drastic.
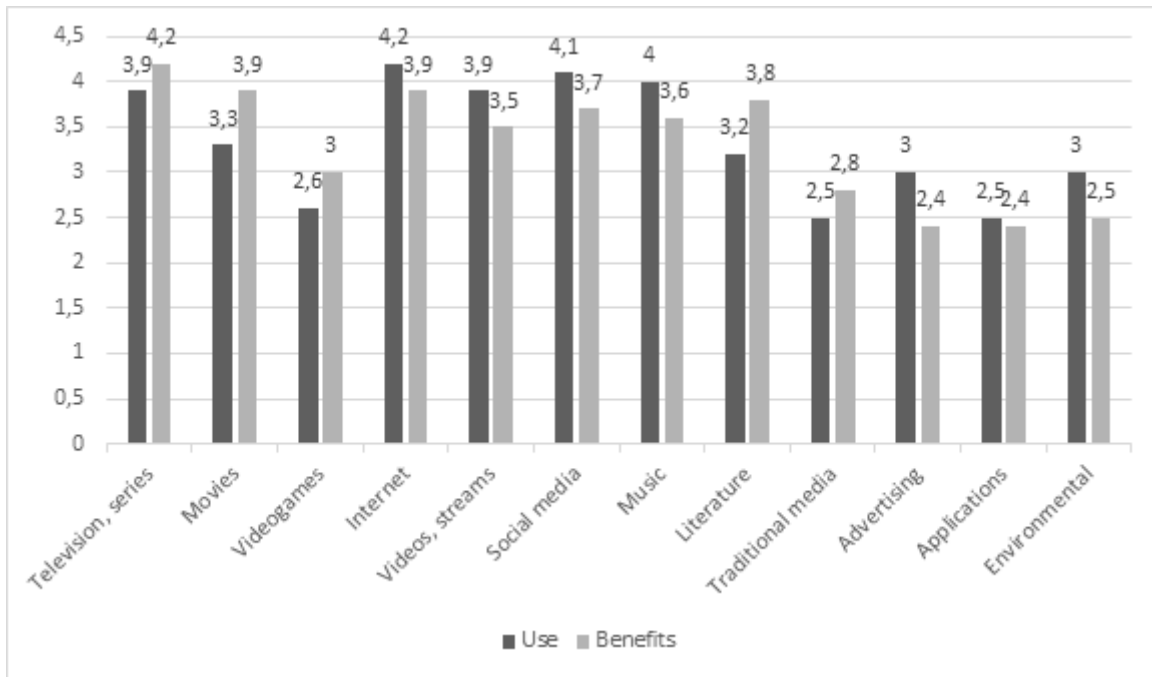
Figure 1: Use and benefits of different media

Internet was among the highest on both the use and benefits for learning English, similarly to social media, music, and videos/streams, although they had bigger differences in the use/benefit ratio than internet did. The amount of use could in itself explain the benefits for the language learning. Advertising had the biggest gap between use and benefit, although environmental objects were close to the same. Applications were more balanced, but they were amongst both the least used and the least beneficial. Although advertising and environmental objects were somewhat present in the everyday lives of the participants, they were not considered truly beneficial. Similarly to the internet, television/series was among the highest for both the use and benefit. It was, however, considered even more beneficial than it was used. The same applies to movies, videogames, literature, and traditional media, although they were not used as much as television/series was.

In addition to the listed media, in the open section of the use and benefit of media in language learning, two people mentioned podcasts, one mentioned teaching materials and religious texts (e.g. the Bible), and another mentioned instant messaging

applications, such as Whatsapp and Messenger, through which they kept in touch with their friends living abroad.

6.1.2 Use of English at school

The participants were first asked when was the last time they studied English in a school setting, to find out how recent their experiences were. The results can be seen in Table 10.

Table 10: Time since last studying English

	f	%
Still studying	53	56%
1 - 2 years ago	26	17%
3 - 5 years ago	9	10%
6 - 9 years ago	10	11%
More than 10 years ago	6	6%

More than half stated they were still studying English, and for a clear majority no more than 2 years had passed since the last time they studied English at school. Therefore, the results are more or less representative of the situation today, or in the recent years.

The use of English at school was studied via different exercise types; to what extent they were used, and how beneficial they were to the participants. These results are visible in Table 11.

Table 11: Use and benefits of exercise types

	1 = didn't benefit at all	2	3 = benefitted a little	4	5 = benefitted a lot	Total	Mean	Median
Listening comprehension	10 (11%)	13 (15%)	18 (21%)	37 (42%)	10 (11%)	88 (94%)	3.3	4
Reading comprehension	1 (1%)	3 (3%)	21 (22%)	41 (44%)	28 (30%)	94 (100%)	4	4
Vocabulary	0 (0%)	1 (1%)	22 (23%)	35 (37%)	36 (38%)	94 (100%)	4.1	4
Grammar	0 (0%)	3 (3%)	21 (22%)	36 (38%)	34 (36%)	94 (100%)	4.1	4
Discussion	5 (5%)	12 (13%)	22 (24%)	28 (30%)	26 (28%)	93 (99%)	3.6	4
Written assignments	1 (1%)	5 (5%)	20 (21%)	37 (40%)	31 (33%)	94 (100%)	4	4
Oral assignments	12 (14%)	9 (10%)	22 (25%)	30 (34%)	15 (17%)	88 (94%)	3.3	4
Technology-assisted	9 (13%)	14 (19%)	24 (33%)	22 (31%)	3 (4%)	72 (77%)	2.9	3
Listening to music	14 (18%)	12 (16%)	24 (31%)	13 (17%)	14 (18%)	77 (82%)	3	3
Watching movies	7 (9%)	16 (20%)	25 (32%)	13 (16%)	18 (23%)	79 (84%)	3.2	3
Watching videos	5 (6%)	16 (20%)	28 (35%)	17 (22%)	13 (16%)	79 (84%)	3.2	3
Total	64	104	247	309	228	-	3.6	-

As the participants had the opportunity to leave a certain exercise type blank if it was not used in their education, it is essential to look into how much the exercise types were used. Reading comprehension, vocabulary, grammar, and written assignments were the only ones that all of the participants had used, although, additionally, discussion exercises were used by every participant but one. Listening comprehension and oral assignments were also used a lot, as almost all the participants reported using them. Most participants also reported watching movies or videos, listening to music, and using technology-assisted exercises, but they were not used as much as the others.

Vocabulary and grammar exercises were considered to be the most beneficial, with reading comprehension and written assignments following close behind. Only a few felt they had not benefitted from them, as for example no one felt they had not benefitted at all from both vocabulary and grammar exercises. None of the exercise

types was drastically less beneficial than others, although technology-assisted exercises, including information search and games such as *Kahoot*, were considered slightly less beneficial.

In addition to the closed questions about the exercise types, four people answered in the open section of the question to add an important exercise type they felt was missing from the list. One of them stated that listening to a chapter of text and then repeating it, in addition to translating the chapters together, focusing on the new or challenging parts, were beneficial for them. Another added playful exercises, such as board games, provided either by the teacher or the book. One listed a chat-program that replaced oral assignments with a pair and yet another pointed out that even though they felt listening to music and watching videos was beneficial in free time, those activities at school were mostly good for taking a break. They explained that this was due to the fact that the music listened to and videos watched during free time were interesting enough to spark their interest, i.e. they had motivation to understand them. Thus, it was beneficial to their learning.

6.2 Comparing Deaf and hearing learners

The second research question aimed to find out whether or not there were differences between hearing and Deaf learners when it comes to the methods of learning English. First, the groups were compared based on their use of different learning environments and how beneficial they considered them to be. Second, their processes of learning English were presented based on which factors they themselves considered to have an effect on their learning in either a positive or a negative manner, addressing the differences between Deaf and hearing participants.

Table 12 shows how frequently the Deaf and hearing participants used English. Table 13 then shows whether or not they considered themselves to be active users of English.

Table 12: Comparison of the frequency of English use

	Deaf		Hearing	
	%	n	%	n
Every day	60%	9	90%	71
A few days a week	20%	3	6%	5
Once a week	7%	1	0%	0
Once in two weeks	0%	0	0%	0
Once in a month	7%	1	0%	0
Less frequently	7%	1	4%	3

Table 13: Comparison of the views on being active users

	Deaf		Hearing	
	%	n	%	n
Yes	53%	8	91%	72
No	40%	6	6%	5
Ambiguous	7%	1	3%	2

While more than half of the Deaf used English every day, in general they used English less frequently than the hearing did. Similarly, a clear majority of the hearing participants considered themselves to be active users of English, whereas only slightly more than half of the Deaf participants described themselves as active users.

The participants were also asked about their earliest memory of English, and to which context, situation, and place does it locate (Question 15). These open answers were analysed and categorized based on the time and location. There turned out to be three categories: 1) As a child, 2) School-aged/at school, and 3) School-aged/outside of school. Two Deaf participants did not describe their earliest memory at all; therefore their answers were excluded from the data of this question. The results can be seen in Table 14.

Table 14: The context of earliest memory of English

	Deaf		Hearing	
	%	n	%	n
As a child	7%	1	58%	46
School-aged / at school	73%	11	28%	22
School-aged / outside of school	7%	1	14%	11
Other	13	2	-	-
Total	100%	15	100%	79

Even though most of the hearing participants had encountered English as a child, before school-age, most of the Deaf participants had their first memory of English from when they started learning it at school. Many of the childhood memories the hearing described were about watching TV, playing games, or listening to music in English.

6.2.1 The learning environments

To achieve an understanding of the differences in the use and benefits of learning environments, the answers of these groups were compared using the Mann-Whitney U method in SPSS, discussed in more detail in Chapter 5.4. The groups were compared on the three aspects discussed in the previous section, i.e. how much they used different learning environments in their free time (table 15), how beneficial they considered those environments to be (table 16), and how the different exercise types were used or how beneficial they were at school (table 17). In the following tables, the values are the means of all the answers by each of these groups. The p-value represents the statistical significance; if $p < 0.05$, the result is statistically significant. Furthermore, if $p < 0.01$, the result is statistically highly significant. The statistically significant values are bolded in the Tables.

Table 15: Comparison of the use of different media

	Hearing (mean)	Deaf (mean)	Z	Asymp. Sig. (2-tailed) / p
Television, series	4.2	2.5	-4,138	**,000**
Movies	3.5	2.3	-3,411	**,001**
Videogames	2.7	1.9	-1,829	,067
internet	4.2	4.1	-1,300	,194
Videos, streams	4.0	3.3	-1,775	,076
Social Media	4.1	4.2	-,217	,828
Music	4.6	1.3	-6,711	**,000**
Literature	3.3	2.6	-1,838	,066
Traditional media	2.5	2.4	-,387	,699
Advertising	3.0	3.1	-,131	,896
Applications	2.4	3.1	-1,753	,080
Environmental	3.0	3.0	-,221	,825

Most of these media were equally used by both the hearing and Deaf participants. Videogames, internet, videos/streams, social media, literature, traditional media, advertising, applications, and environmental objects had no statistically significant differences between the two groups, i.e. they were equally used. Television/series, movies, and music, however, were statistically highly significant. The hearing participants used these much more than the Deaf participants did. Social media, advertising, and applications were the only media used by the Deaf slightly more, but the differences were not statistically significant.

Table 16: Comparison of the benefits of different media

	Hearing (mean)	Deaf (mean)	Z	Asymp. Sig. (2-tailed) / p
Television, series	4.4	3.0	-3,971	**,000**
Movies	4.1	2.9	-3,479	**,001**
Videogames	3.0	2.8	-,428	,668
internet	3.9	4.1	-,462	,644

Videos, streams	3.7	2.8	-2,222	**,026**
Social Media	3.6	4.0	-1,016	,309
Music	4.0	1.5	-5,398	**,000**
Literature	4.0	3.1	-1,741	,082
Traditional media	2.7	3.1	-1,455	,146
Advertising	2.3	3.0	-1,851	,064
Applications	2.3	2.9	-1,809	,070
Environmental	2.3	3.0	-1,872	,061

Similarly to the use, most of the media were considered equally beneficial by both groups. There were no statistically significant differences in the benefits of videogames, internet, social media, literature, traditional media, advertising, applications, or environmental objects. The difference in videos/streams was significant, i.e. the hearing considered them to be more beneficial than the Deaf did. As expected, the differences in television/series, movies, and music, all of which heavily rely on hearing, were highly significant, meaning the hearing benefitted from them much more than the Deaf did. The Deaf felt they benefitted more from internet, social media, applications, and environmental objects, but these differences were not statistically significant.

Table 17: Comparison of the use and benefits of the exercises at school

	Hearing (mean)	Deaf (mean)	Z	Asymp. Sig. (2-tailed) / p
Listening comprehension	3.5	1.2	-6,016	**,000**
Reading comprehension	4.0	4.0	-,760	,447
Vocabulary	4.1	4.3	-,644	,520
Grammar	4.1	4.2	-,614	,539
Discussion	3.7	3.0	-2,255	**,024**
Written assignments	4.0	3.7	-1,098	,272

Oral assignments	3.5	1.7	-4,497	**,000**
Technology-assisted	2.9	3.3	-1,237	,216
Listening to music	3.3	1.0	-4,601	**,000**
Watching movies	3.3	2.8	-,747	,455
Watching videos	3.3	2.8	-1,383	,167

Table 17 presents the use and benefits of different exercises possibly used at school, comparing the answers of hearing and Deaf participants. Many of the results were, again, similar or even identical between both the hearing and Deaf participants. Reading comprehension, vocabulary, grammar, written assignments, technology-assisted exercises, watching movies, and watching videos were considered equally beneficial by both groups in the sense that there were no differences that would have been statistically significant. The differences in discussion exercises were statistically significant, and those in listening comprehension, oral assignments, and music were highly significant. In other words, the hearing felt they learned English more through these exercises than the Deaf did, which was expected as the exercises require hearing. The only exercise types that were more beneficial to the Deaf than the hearing were vocabulary, grammar, and technology-assisted exercises, but the differences were not statistically significant.

6.2.2 Factors affecting the process of learning English

The open-ended question 16 was analysed using the qualitative content method presented by Tuomi and Sarajärvi (2018), discussed in Chapter 5.4. The analysis of individual answers began with reducing them to rather simple keywords, which were then combined to form subcategories, eventually leading to the main categories. Example 1 from one of the participants is used to demonstrate this process:

> *(1) Improved: encouragement from friends and fellow speakers*

Disturbed: studying styles in elementary and secondary schools. A lot of literary studying. The teaching advanced depending on the best. I would have needed differentiation, which wasn't really used in the general education during my years at elementary school. - Hearing participant

The keywords that emerged from this example included "Encouragement", "Written language", and "Differentiation". These keywords were later paired with others to form subcategories. For example, "Differentiation" was later paired with "Grammar exercises", "Vocabulary tests", "Discussion", and other mentions considering different teaching or learning methods, to form the subcategory Methods.

The three most important categories that emerged from the data, i.e. the main categories, were *Teaching styles*, *Motivation*, and *Using the language,* which Figure 2 represents.
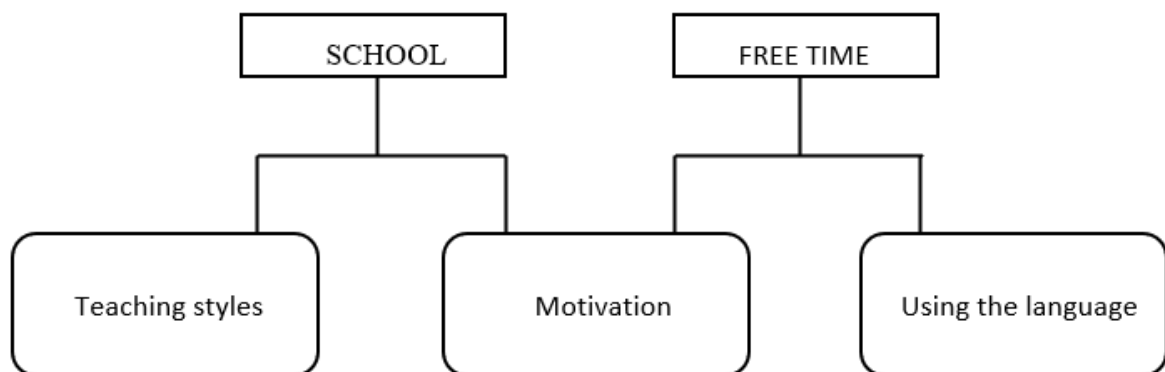
Figure 2: The division of the main categories

As the participants were asked to describe their learning processes both in free time and at school, the categories represent this division. *Teaching styles* refers to factors situated at school, while *Using the language* refers to free time use of English. *Motivation*, however, was seen as a key factor in both of these areas, therefore, it is relevant and present in both areas.

Each main category consisted of several subcategories, all of which can be seen in Table 18. Determining which subcategory goes with which main category, or which key word belongs to which subcategory, was partly based on interpretation, as many of the answers were short and vague. For example, the keyword 'Benefit' could have been placed in either subcategory of Motivation, as it could either have been seen as an outside encouragement (e.g. benefit = money), or the individual's own perception of valuing the language. Similarly, the difficulty of English could either have been seen as the source of the individuals motivation (e.g. language too difficult, therefore no need to even try), or the lack of differentiation (i.e. the individual did not receive the help they needed from the teacher). In these cases, the participant's own interpretation was taken into account as much as possible. For example, if they themselves mentioned that English was not motivating to them because it was too difficult, their answer was counted as an example of motivation

Table 18: Categories of the analysis

Main categories	Subcategories	Examples of keywords
Teaching styles	Content	Inconsistency Detail-focused Boring material
	Methods	Interpreters Differentiation Grammar Vocabulary tests
	Surroundings	English school Exchange
Motivation	Encouragement	Teacher Family Friends
	Individual	Activity Success Challenge Benefit
Using the language	Content	Variety Formality Authenticity

	Means of language use	Music Literature Subtitles
	Access	Exposure as child Everyday life Infrequency
	Surroundings	Being abroad

In addition to Methods, *Teaching styles* consists of the Content and Surroundings. All of the themes of these subcategories were seen as conscious decisions made by the teacher, which is why they were combined to form this first main category. The second main category, *Motivation*, contains two subcategories, Encouragement and Individual. These were mentions of motivation emerging either from the outside or from the individual's own personality, interests, or beliefs. For example, the mention of encouragement by friends in Example 1 was placed in the subcategory Encouragement. The third main category, *Using the language*, was formed based on different ways and places in which English was used. It consists of four subcategories; Content, Means of language use, Access, and Surroundings. As can be seen, content and surroundings were considered important both in free time and at school, which is why they are present in two of the main categories.

Table 19 shows how many times the different categories were mentioned in the answers. The positive and negative mentions, in addition to the mentions done by both Deaf and hearing, were separated. The focus was not on how many of the participants mentioned a certain category, but on how many times the categories were mentioned. Therefore, each mention was counted, even if there were several within one answer, i.e. if one participant mentioned 'music' and 'movies', both belonging to the Means subcategory, two mentions of the category were counted instead of one. Thus, the numeric value representing the number of mentions in the table does not match the number of answers.

Table 19: Mentions of the factors affecting learning

		Deaf			Hearing		
		Positive	Negative	**Total**	Positive	Negative	**Total**
Teaching styles (99)	Content	2	4	**6**	6	11	**17**
	Methods	11	9	**20**	31	17	**48**
	Surroundings	0	0	**0**	6	0	**6**
	Total	**14**	**13**	**27**	**43**	**28**	**71**
Motivation (101)	Encouragement	2	1	**3**	15	13	**28**
	Individual	5	6	**11**	34	27	**61**
	Total	**7**	**7**	**14**	**49**	**40**	**89**
Using the language (208)	Content	3	0	**3**	3	4	**7**
	Means	12	0	**12**	140	4	**144**
	Access	3	0	**3**	24	4	**28**

	Surroundings	1	0	**1**	9	1	**10**
	Total	**19**	**0**	**19**	**176**	**13**	**189**

All in all, *Using the language* was clearly the largest category, with approximately double the number of mentions compared to the other categories. *Teaching styles* and *Motivation* were mentioned more or less equally often. *Teaching styles* was mentioned as a negative factor more often than positive, whereas both *Motivation* and *Using the language* were more often positive than negative.

In the context of school, both groups mentioned Content as having a negative effect more often than positive. Both groups also explained that boring or inauthentic materials were harmful for their learning. A few hearing participants mentioned that the teaching was inconsistent or too focused on detail, whereas the Deaf felt more that the teaching was outdated and one-sided, ignoring their deafness.

> *(2) The hearing-focused schoolbooks were harmful. The constant listening comprehensions or pronunciation exercises pissed me off.* - Deaf participant

Both groups mentioned Methods more often positively than negatively. The positive mentions were mostly different types of exercises, such as written assignments, discussion, or vocabulary and grammar exercises, which were beneficial to the individual learners. Both groups appreciated combining several methods and exercises for variety. The Deaf also mentioned the use of sign languages of English-speaking countries; using them was mentioned as a positive factor, and not using them as a negative. The use of interpreters was seen as a negative factor, as translating English to Finnish Sign language did not benefit learning English at all. Additionally, differentiation emerged rather often in the answers of both of the groups. Most of the time the hearing felt that they were, for example, held back by their less skilled classmates with whom they were forced to work. Some of the Deaf, however, mentioned how they were almost expected to learn like the hearing do, i.e. their

teaching was not differentiated enough. For example, the lack of replacement activity for oral discussion exercises was brought up.

> *(3) I would have wished British or American sign languages were taught more, as it would have made learning English more meaningful (they support each other). -* Deaf participant

> *(4) Using study-interpreters has been harmful to studying, as even though the teacher had spoken in English, the interpreters have interpreted in Finnish sign language and I have not learned anything from it. Nowadays they use for example writing interpreters in language classes, and I am sure that it is much more beneficial than the use of Sign language interpreters. -* Deaf participant

Surroundings were not mentioned by the Deaf at all in the school context, but the hearing mentioned them solely in a positive manner. One participant mentioned being in an English school, whereas all of the others mentioned being an exchange student as a positive factor.

In motivation, the individuals' own attributes and beliefs were more meaningful than the encouragement from others. Motivation was in general seen slightly more often in a positive than negative way. Many participants described how personal interest towards language learning and an active pursuit to use the language were essential to language learning. Most of the negative individual factors were about fear of making mistakes, which often led to insecurity and avoiding language use, therefore harming the learning process. Successes and failures were also important factors in motivation, as they affected the individuals' views of themselves as language learners, either boosting or lowering their self-esteem. Similarly, finding learning English either too challenging or not challenging enough were reported to have negative effects. In addition, some Deaf participants felt they were behind their hearing peers to begin with, which led to feelings of inequality.

> *(5) It was harmful that I had fallen behind the hearing to begin with, I felt I aced grammar but had poor vocabulary. Many learned automatically from TV-series, I had to learn separately. -* Deaf participant

Most of the mentions concerning encouragement, both in a negative and positive way, were about teachers. Both the Deaf and hearing participants felt that an encouraging teacher, who also gave sufficient and constructive feedback, positively affected their motivation to learn. Similarly, a too strict or harsh teacher who, in some cases, even belittled the learner, harmed the motivation. Some learners even begun to think they were not good enough to use the language, which led to other problems, such as their language skills deteriorating. Some participants also mentioned how the general atmosphere in the classroom had an effect; if the classmates were mean and did not encourage learning, the fear of making mistakes increased. Family and friends were also a positive source of motivation.

> *(6) An encouraging and invigorating teacher has always been an important factor for me. Also the classroom atmosphere affects a lot: one has the courage to answer if the atmosphere is good.* - Hearing participant

> *(7) It was beneficial that the teacher realized my potential and demanded more from me than from those who were not interested.* - Deaf participant

> *(8) Con: bad, unmotivating high school teacher, who made me question my own skills.* - Hearing participant

In the free time setting, content was considered to be both a positive and a negative factor. Similarly to the school setting, the authenticity and variety of content was appreciated. Several participants also mentioned how they learned more informal language that is "actually used", versus the more formal version of English learned at school. Some participants, however, saw the informality of internet language as a negative factor, as they had e.g. started to use incorrect forms of words and expressions.

> *(9) It was beneficial that at school the form and producing of the basic language was learned, and outside of school vocabulary that better matches the actual language use outside of standard language.* - Hearing participant

(10) Con: internet (lack of grammar and differences to the "orthodox" structure of texts - Hearing participant

Means of language use were considered to be significantly more positive than negative. It was also the most mentioned subcategory, which might have been affected by the fact that different means were the focus in the first part of the study, i.e. several of them had been listed previously in the questionnaire. Most of the mentions were different media in which the language was used, such as music, television, movies, and games. Almost all of the Deaf participants who mentioned any means of language use, mentioned human contact (such as having an English-speaking pen pal, or other friends with whom use English). It was also noticeably present in the answers of the hearing. Interestingly, none of the Deaf participants mentioned subtitles as a mean of language use, whereas it was mentioned quite many times by the hearing. All of the negative mentions of different means were linked to some other phenomenon, such as the informality of the language used on the internet being harmful to their learning of grammar.

(11) I feel that certain environments which are part of my interests and naturally present in the everyday lives have been beneficial to my studying. Movies, social media, friends who use English… - Deaf participant

Access was somewhat beneficial to the hearing, but not so much for the Deaf. The hearing described how they have had exposure to English since they were children, and how English is present in their everyday lives, as "everything is in English". They also mentioned how beneficial it has been that they have been able to practice the use of English in everyday life situations. The few negative mentions of access were from participants who felt they do not have or have not had frequent possibilities to use English. Only a couple of Deaf participants mentioned that English is present in their everyday lives, and none of them mentioned being exposed to English in their childhood.

(12) being exposed to the language since being little, for example through television and games - Hearing participant

Surroundings were also seen in a positive way more often than in negative. In practice, either living or traveling abroad was seen as a positive factor, whereas not traveling and lacking native speakers with whom have conversations, was considered to have a negative effect. Only one Deaf participant mentioned traveling at all.

In addition, some of the participants stated either 'everything' or 'nothing' was beneficial or harmful to their language learning processes in free time or at school. All of these participants, however, were hearing. Seven participants mentioned that nothing was harmful to their learning in free time. Similarly, eight participants stated that nothing was harmful to their learning at school, and three mentioned that everything was beneficial. Two participants, however, stated that they felt nothing had been really beneficial for their learning at school.

(13) I cannot think any harmful ones, in my opinion every time one is in contact with Englush language they learn something from it and it's mostly good. - Hearing participant

(14) I feel I haven't really learned much at school, instead I've got along with the skills I've learned elsewhere. - Hearing participant

All in all, both groups' descriptions of their learning processes were rather similar, and the differences were mostly in small nuances. For example, both groups considered motivation to be a key factor in language learning and valued authentic and interesting materials. The Deaf, however, added that the materials and textbooks were clearly aimed towards hearing learners and not them, which was not a problem for the hearing learners. I.e. the content of the both groups' answers were similar, but the details were different.

7 DISCUSSION

This Chapter focuses on discussing the findings of this study in more depth, and the entire analysis process is critically evaluated. The analysis and findings are also evaluated and connected to previous research. This Chapter is divided into two, based on the two research questions. First, in Chapter 7.1, the learners' everyday use of English is examined, focusing on the learning environments they use. Second, in Chapter 7.2, the differences emerging from the comparison between the Deaf and hearing learners are discussed.

7.1 Learning environments in everyday use of English

The first research question was "How do learners of English use the language in their everyday lives?", followed by "What kind of learning environments do they use during free time? How about in formal education?" This study aimed to study the different media present in today's learners' everyday lives as learning environments, as most previous studies only focused on one learning environment at a time. This was done partly in order to create a base for the comparison between the hearing and Deaf learners, which was the main focus of this study.

The majority (85%) of the participants used English every day, and only a small part used it less than on a few days a week. The majority (85%) also considered themselves to be active users of English. English was used with several different people, mostly with friends or strangers, but many also stated they use English alone. This was not unexpected, as for example in Leppänen et al.'s (2009) study, 80% of the participants reported seeing or hearing English every day. The fact that most of the participants in this study were aged 30 or under also strengthened the assumption that English would be used a lot, as for example Niemi et al. (2014) found that younger people are more skilled in English, and it could be expected that young people also use English in their lives more.

The participants also reported using several different media during their free time, which was expected based on Luukka et al.' (2008) study. Several previous studies (see e.g. Rongas & Honkonen 2016; Linnakylä 2010; Ala-Kyyny 2012) have shown that utilizing informal learning environments, such as these media, is beneficial to language learning. Similar phenomena were visible in this study as well, as for example approximately half of the participants felt they had learned a lot of English from television or series. Other highly beneficial learning environments included movies, internet, social media, music, and videos/streams.

Determining which environments actually were most beneficial, however, was not always straightforward. The correlation between how much a media was used and how beneficial it was might have had an effect on the results. For example, video games were not used at all by many of the participants, which was likely to lead to many stating they had not learned any English through them. This, in turn, presumably affected the overall score of the benefits of the games. All of the media, however, were beneficial at least to some extent to the learning of English. Therefore, the goal to cover informal learning environments somewhat comprehensively was met, even though the environments were not clearly ranked based on their benefits.

In addition to the free time, the process of learning English was also studied from the point of view of education. As the clear majority of the participants were either still studying (53%) or had studied English less than two years ago (17%), the findings represented the current situation rather well. Azzarro (2014) found that the students preferred traditional classroom situations even when it meant less personal interaction, and they also found printed material preferable to multimedia materials. He did, however, point out that part of the reason might be what the students had got used to. The answers in this study reflected similar results. On average, the different exercise types and learning environments utilized at school, i.e. the more traditional ways of learning, were considered to be slightly more beneficial than the more informal ones in free time. This, however, could be because the participants possibly

had got used to the more traditional ways during their previous education, as Azzarro also suspected.

On average, the environments utilized at school had more balanced scores: the informal free time environments were more spread, ranging from two to four, whereas those at school were mostly threes or fours. It was not entirely unexpected, as the teaching at school, including designing the exercises and planning lessons, is done by pedagogical professionals, whereas e.g. information signs are not designed for language learning to begin with. Therefore, it is not surprising that the learners felt in general that they had learned more at school. Additionally, it is interesting how e.g. watching videos or movies, or listening to music, which were among the most beneficial environments in free time, were ranked the lowest on benefits at school, which would indicate that incorporating the informal environments to education is not always necessarily beneficial.

In their answers to the open question about either beneficial or harmful factors in language learning, many participants appreciated variety and authenticity of materials, which in turn supports the use of more informal learning environments as well. The participants mentioned how using English in the kind of environments they naturally use anyway (such as social media or the internet) is easy, motivating, and beneficial. Social media posts, articles from real magazines, and videos made by English-speaking people are examples of authentic materials that could be used in education as material for language learning. It is essential that the different learning environments are used diversely and combined in different ways, as variety was also appreciated by the participants.

All in all, the results of this study support previous findings in the sense that many informal learning environments were considered beneficial by the learners. Television/series, movies, videogames, internet, videos/streams, social media, music, literature, and traditional media all proved to be beneficial to their users when learning English. Even advertising, different applications, and environmental objects were seen

as a somewhat beneficial sources of language learning by the participants. However, the participants felt that school has its own important role in language learning: the 'basic', correct, and more formal form of English is learned at school, whereas the 'actually used' language is learned in more informal environments and contexts. This is a notion that Kalaja et al. (2011) also made in their study.

7.2 The Deaf as English language learners

The main aim of this study was to look into the Deaf learners of English and their processes of English language learning. As this was done by comparing them to the hearing learners, the second research question was "Is there a difference between Hearing learners and Deaf learners of English when it comes to the methods of learning English?" followed by additional "Which factors have (positively or negatively) affected their learning process?"

As there were not many previous studies on the Finnish Deaf learning English, there were not many expectations on the results of this study, either. However, due to the lack of auditory input, it was expected that there are differences between the Deaf and hearing learners. As it had been previously proven that for example music, movies, and television, all of which more or less rely on sound, were beneficial for the hearing learners of English, it was interesting to look into if there were any replacing means that would, in turn, benefit the Deaf learners significantly more.

Two thirds of the Deaf participants reported using English every day, and slightly over half considered themselves to be active users of it. Both of these portions were significantly lower than in the hearing group, where the clear majority both used English daily and considered themselves to be active users. As Tapio (2017) had previously found that it is possible to have the misconception of not using English as much simply because as a Deaf person one does not hear it in its spoken form, it would be interesting to investigate the phenomena behind this result. Did the Deaf really use English less frequently, or did they not realize how much they used it? Naturally, as

the answers from both the Deaf and the hearing were based on their own conceptions, not only the Deaf participants' answers should be questioned.

Eventually there were quite many differences in the learning processes of the Deaf and hearing learners, although there were some similarities as well. When it came to the different media as learning environments, most of them were equally beneficial to both the Deaf and hearing learners. The Deaf, however, did not benefit from any of those environments significantly more than the hearing did, whereas the hearing benefitted from videos/streams, television/series, movies, and music significantly more. A similar trend was seen in the educational setting, as most of the exercise types were equally beneficial to both groups, but the hearing benefitted significantly more from those that relied on hearing, i.e. discussion, listening comprehension, music, and other oral exercises in general. This was expected, as these environments rely heavily on hearing.

The answers on the open-ended question about their language learning processes revealed a deeper description of learning English as a Deaf person. The Deaf participants mentioned how they were almost expected to learn in similar ways as their hearing peers, i.e. their lack of hearing was not compensated. The textbooks were designed for the hearing and contained listening comprehension exercises, and the teaching felt outdated in general. Some ways of trying to make the teaching accessible to the Deaf, such as the use of Finnish sign language interpreters, was seen as more harmful than beneficial, as when the interpreters were the ones to translate English to Finnish Sign language the Deaf had even less contact with English during lessons. Instead, a wish for the use of British, American, or other English-speaking country's Sign languages was brought up, as it was believed to support the learning of English as well.

When looking at the data from the perspective of education, however, it should be noted that it had, in general, been a longer time since the Deaf participants had studied English in a school setting. The majority of hearing participants had studied English

in the past two years or still did, whereas only 20% of the Deaf still studied English, a third had studied it 6 - 9 years ago and another third 10 or more years ago. Therefore, some of the answers by the Deaf reflect a time from a while ago and not necessarily the current situation of Deaf education. Indeed, one participant described how nowadays the use of writing interpreters has fortunately become more common instead of regular interpreters. Another stated that the traditional way of using mainly written assignments has now broadened, and more modern variations have emerged. These include using internet-based chat platforms to replace discussions, which were also used in Tapio's (2013) study.

It seems that there was some inequality in the access to the language between the hearing and the Deaf. Unlike some of the hearing participants, none of the Deaf mentioned being exposed to English since childhood. This is in line with the descriptions of their earliest memories of English, as most of the Deaf placed their first memory of English to when they started learning it at school. However, it needs to be remembered that childhood memories are extremely subjective and do not necessarily represent the truth. None of the Deaf listed traveling or being abroad as a factor, either, unlike many of the hearing did. Although the Deaf did describe using English in several different ways in their everyday lives, none of them explicitly stated that English is "everywhere", like many of the hearing did. This is in line with the previous finding that the Deaf did not consider themselves to be active users, and in general used English less frequently than the hearing.

All in all, the Deaf seemed to learn English in a more or less similar manner than the hearing did, and both formal and informal learning environments did prove to be beneficial to them as well. However, an interesting finding, possibly even the most important one in this study, was that the lack of music and other auditory environments was not clearly compensated by any other environment. In fact, the Deaf did not benefit from any of the environments, media, or exercise types significantly more than the hearing did.

8 CONCLUSION

The main aim of this study was to examine how the Deaf learn English as a foreign language, focusing on what the learning processes are like, and how different learning environments are used. To study the learning of the Deaf, they were compared to hearing learners of English as a foreign language. As no single previous comprehensive study of learning environments to base the comparison on was found, this study also aimed to cover and examine several learning environments at once. Both quantitative and qualitative methods were utilized in order to both be able to compare the groups easily (closed, numeric questions), and achieve a deeper understanding of the process (open-ended questions). The data were collected using an online questionnaire. Eventually there were 99 participants, of which 79 were hearing, 15 were Deaf, and 5 were hard of hearing. Later, the hard of hearing were excluded from the study due to the small size of the group, leaving 94 participants in total.

The results of this study were in line with previous studies about learning environments, as the more informal learning environments were found to be beneficial when learning English as a foreign language. The 12 informal media listed were all found to be beneficial, some more than others. Amongst the most beneficial (and most used) media were television/series, movies, internet, videos/streams, social media, music, and literature. In an educational setting, i.e. at school, all the listed exercise types were found beneficial as well. In general, the participants felt that they had learned slightly more English through the different environments at school than in their free time, which might have been due to the fact that school is designed to benefit learning, whereas the informal media are not. It is also possible that the learners do not recognize the free time language use as learning.

One of the main findings of this study was that although the Deaf and hearing benefitted from different learning environments mostly equally, there was nothing to compensate the fact that the hearing benefitted from the auditory environments

significantly more. In free time, music, television/series, videos/streams, and movies, and at school listening comprehensions, discussion, oral assignments, and listening to music were significantly more beneficial to the hearing than the Deaf, but there were no environments that would have been more beneficial to the Deaf than the hearing. However, it is possible that the schools have not taken the Deaf into account when designing the teaching, and even though none of these common media or somewhat traditional exercise types proved to be significantly more beneficial to the Deaf, there might be some other environments in which the Deaf would thrive. It could be beneficial to study these further.

Additionally, compared to the hearing the Deaf reported using English less frequently, did not consider themselves active users as much, and encountered English at a later age. Although English was present in the everyday lives of the Deaf as well, they did not have equal access to it. For example, none of the Deaf listed traveling as a factor for their language learning, whereas it was rather popular among the hearing. As Tapio's (2017) already shows that it is possible that the Deaf do not realize how much English there is around them, this could also be studied further.

Some of the Deaf felt their teaching had been outdated, and it had failed to take into account their degree of hearing. The use of Finnish Sign language interpreters was seen as a harmful factor, instead, the use of English-speaking countries' sign languages was hoped for. The teaching of English to the Deaf could be studied further, and in more detail; what are the practices now? Have British, American, or other sign languages been utilized somewhere, and if yes, what kind of effects have those had? Are there more ways to replace auditory tasks at school with something more beneficial to the Deaf?

In addition to combining several learning environments under one study, this study has shed some light on the previously unfortunately rarely studied subject of the Finnish Deaf learning English as a foreign language. Hopefully it will provide to be useful to the future Deaf learners of English and their teachers when designing the

teaching or learning of the language. It once again emphasizes the need for differentiation in education and reminds that the Deaf should not be forgotten when discussing the future of education.

Although the little under 100 participants give a rather comprehensive idea of how the participants used English in their everyday lives, the sample is rather limited. There is no absolute way of knowing if the request for participants spread far, but it is likely that the majority of the participants were students of the University of Jyväskylä, as its email lists were the main means of reaching out to possible participants. Furthermore, the email lists were those of language subjects, including English, meaning that the participants presumably already had an interest towards learning languages and were skilled in it. Additionally, the majority of the participants were young women, which also makes the sample more limited.

Obtaining a sufficient number of Deaf participants proved to be problematic. Even though the unfortunately small sample of Deaf participants does in a way represent the percentage of deaf people in our society, it was hoped that there would be more Deaf participants. As no strict definition of Deafness was provided, the participants were free to choose the option with which they identified with. Therefore, there is no way of knowing for certain the degree of deafness of the participants, or how many of them e.g. have the cochlear implant, and how that affected the results of this study.

This study relied heavily on the participants' own perception of themselves as English learners and their skills in the language. Therefore, there is no way of knowing for certain if a person who e.g. claimed to have learned nothing from a certain environment actually did so. The age limit for the participants aimed to make sure they, as adults, were better equipped to reflect on their learning process, but in practice there is no certainty. With the limitations of the sample in the participants' educational background, gender, age, and group size, no generalizations that would spread to every language learner can be made.

Despite the limited sample this study has shed some light on the processes of learning English as Deaf. There were some significant findings, e.g. differences found between the hearing and Deaf learners and their learning processes. If nothing else, this study proves that there is still room for new study in the field of Deaf and language learning, and that it should be studied further. Hopefully this study encourages future Deaf learners and their teachers to further consider the learning processes, methods, and possibilities, and to understand that learning English is equally possible to the Deaf as well, if the means are right.

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APPENDICES

Appendix 1 – The Questionnaire

Gradukysely: Englannin oppiminen / Thesis Questionnaire: Learning English

Tervetuloa vastaamaan gradututkimukseeni, jonka aiheena on erilaisten oppimisympäristöjen ja työtapojen hyödyntäminen englannin oppimisessa, sekä koulussa että vapaa-ajalla. Esimerkiksi teknologian kehitys on tuonut mukanaan lukemattomia uusia väyliä, joiden kautta englantia kohdataan jopa päivittäisessä arjessa. Vaikka yksittäisiä oppimisympäristöjä on tutkittu osin laajaltikin, ei kattavaa listausta eri oppimisympäristöjen käytöstä ole tietääkseni saatavilla.

Tutkimukseni kohderyhmään kuuluvat sekä kuulevat että kuurot ja huonokuuloiset. Tavoitteenani on tehdä vertaileva tutkimus siitä, onko näiden ryhmien oppimisympäristöjen käytössä eroja. Jos on, millaisia ne ovat?

Tutkimukseeni voit osallistua jos olet 18-40 -vuotias eikä äidinkielesi ole englanti.

Kyselyyn vastaaminen on täysin vapaaehtoista. Koska kirjautumista, sähköpostia tai muitakaan yksilöiviä tietoja ei vaadita vastaamiseen, kysely on täysin anonyymi. Vastaamalla kyselyyn annat tutkijalle luvan käyttää kerättyä dataa tutkimuksessa.

Lisäkysymyksissä voi olla yhteyksissä suoraan minuun
pia.m.eriksson@student.jyu.fi

tai graduni ohjaajaan
Anne Pitkänen-Huhta
anne.pitkanen-huhta@jyu.fi

Kiitos vastauksistasi!
- Pia Eriksson

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Welcome to taking part on my thesis questionnaire, the subject of which is the use of different learning environments and types when learning English, both at school and during free-time. Such things as the development of technology have brought with them countless new media, through which English can be encountered in people's everyday lives. Even though individual learning environments have been studied rather widely, no general listing of the use of different learning environments is, at least to my knowledge, available.

The target group of my study consists of hearing, deaf, and hard-of-hearing people. It is my goal to conduct a comparative study considering what kind of differences there are between these three groups, if any.

The participants of this study must be aged between 18 and 40, and their mother tongue cannot be English.

The participation in this study is voluntary, the survey is completely confidential, and all informants will remain anonymous as you are not required to log in and no email addresses are collected. By taking part

in the survey you give the researcher your informed consent to use the anonymous data collected in the survey.

If you have any further questions, you can contact me
pia.m.eriksson@student.jyu.fi

or the supervisor of my Thesis
Anne Pitkänen-Huhta
anne.pitkanen-huhta@jyu.fi

Thank you for Your answers!
- Pia Eriksson

1. Olen / I am... *

- ○ Kuuro / Deaf
- ○ Kuuleva / Hearing
- ○ Huonokuuloinen / Hard-of-Hearing

2. Äidinkieli / Mother tongue

- ○ Suomi / Finnish
- ○ Suomalainen viittomakieli / Finnish Sign Language
- ○ Muu, mikä? / Other, which? [   ]

3. Ikä *

- ○ 18-20
- ○ 21-25
- ○ 26-30
- ○ 31-35
- ○ 36-40

4. Sukupuoli / Gender *

- ○ Nainen / Female
- ○ Mies / Male

○ Muu / Other

○ En halua sanoa / Don't want to say

5. Korkein suorittamasi tutkinto / Highest completed Degree *

○ Peruskoulu / Basic education

○ Lukio / High School

○ Ammattikoulu / Vocational school

○ Ammattikorkeakoulu / University of Applied Sciences

○ Kandidaatin tutkinto (Yliopisto) / Bachelors' Degree (University)

○ Maisterin tutkinto (Yliopisto) / Masters' Degree (University)

Seuraavien kysymysten tarkoitus on kartoittaa, miten ja millaisissa tilanteissa käytät englantia vapaa-ajalla. 'Käyttämisellä' tarkoitetaan tässä yhteydessä esimerkiksi näkemistä / katsomista, lukemista, kirjoittamista, kuulemista ja puhumista.

The purpose of the following question is to outline how and in which situations you use English during your free-time. 'Using', in this case, refers to e.g. seeing / watching, reading, writing, hearing, and speaking.

6. Kuinka usein käytät arjessasi englantia keskimäärin? / How often do you use English in your everyday life, on average? *

○ Joka päivä / Every day

○ Muutamana päivänä viikossa / A few days a week

○ Kerran viikossa / Once a week

○ Kerran kahdessa viikossa / Once in two weeks

○ Kerran kuukaudessa / Once in a month

○ Harvemmin / Less frequently

7. Kenen kanssa käytät englantia arjessasi? (Voit valita useamman) / With whom do you use English in your everyday life? (You can choose more than one) *

☐ Perheen / Family

☐ Ystävien / Friends

☐ Yksin / Alone

☐ Tuntemattomien / Strangers

☐ Jonkun muun, kenen? / Someone else, who?

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└─────────────────────────────────┘

8. Seuraavana on listattu joistakin yleisimmistä medioista, joiden kautta englantia käytetään. Kuinka paljon käytät niitä arjessasi keskimäärin?
(1 = en lainkaan, 3 = en paljon enkä vähän, 5 = paljon) /
Following is a list of some of the most common media, through which English is used. How much do you use them in your everyday life (on average)? (1 = Not at all, 3 = Some but not much, 5 = A lot) *

	1	2	3	4	5
Televisio, TV-sarjat / Television, series	○	○	○	○	○
Elokuvat / Movies	○	○	○	○	○
Videopelit / Videogames	○	○	○	○	○
Internet (blogit, vlogit, forumit,..) / (blogs, vlogs, forums,..)	○	○	○	○	○
Videot, streamit / Videos, streams (Youtube, Twitch,..)	○	○	○	○	○
Sosiaalinen media / Social media (Facebook, Twitter, Snapchat, Instagram..)	○	○	○	○	○
Musiikki / Music	○	○	○	○	○
Kirjallisuus / Literature	○	○	○	○	○
Perinteinen media (uutiset, sanomalehdet, e-lehdet) / Traditional media (news, newspapers, e-magazines,..)	○	○	○	○	○
Mainokset (lehdissä, kaduilla, TV:ssä,...) / Advertising (magazines, on street, in TV,..)	○	○	○	○	○
Sovellukset / Applications (Dualingo, Worddive,..)	○	○	○	○	○
Ympäristön esineet (kyltit, infotekstit, sisällysluettelot, muut sekalaiset) / Enviromental objects (signs, infotexts, table of contents, other miscellanious)	○	○	○	○	○

9. Kuinka paljon koet hyötyneesi seuraavien medioiden käytöstä, eli kuinka paljon olet oppinut niiden avulla englantia?
(1 = en lainkaan, 3 = en paljon enkä vähän, 5 = paljon) /
How much do you feel you have benefitted from using the following media, i.e. how much have you learned English through them? (1 = Not at all, 3 = not much but some, 5 = a lot) *

	1	2	3	4	5
Televisio, TV-sarjat / Television, series	◯	◯	◯	◯	◯
Elokuvat / Movies	◯	◯	◯	◯	◯
Videopelit / Videogames	◯	◯	◯	◯	◯
Internet (blogit, vlogit, forumit,..) / (blogs, vlogs, forums,..)	◯	◯	◯	◯	◯
Videot, streamit / Videos, streams (Youtube, Twitch,..)	◯	◯	◯	◯	◯
Sosiaalinen media / Social media (Facebook, Twitter, Snapchat, Instagram..)	◯	◯	◯	◯	◯
Musiikki / Music	◯	◯	◯	◯	◯
Kirjallisuus / Literature	◯	◯	◯	◯	◯
Perinteinen media (uutiset, sanomalehdet, e-lehdet) / Traditional media (news, newspapers, e-magazines,..)	◯	◯	◯	◯	◯
Mainokset (lehdissä, kaduilla, TV:ssä,...) / Advertising (magazines, on street, in TV,..)	◯	◯	◯	◯	◯
Sovellukset / Applications (Dualingo, Worddive,..)	◯	◯	◯	◯	◯
Ympäristön esineet (kyltit, infotekstit, sisällysluettelot, muut sekalaiset) / Enviromental objects (signs, infotexts, table of contents, other miscellanious)	◯	◯	◯	◯	◯

10. Puuttuiko listasta jokin tärkeä media, jota käytät ja / tai josta koet hyötyneesi? / Was there an important media you use, and / or feel to be beneficial, missing from the list?

Seuraavien kysymysten tarkoitus on kartoittaa, miten ja millaisissa tilanteissa käytät / käytit englantia koulussa. 'Käyttämisellä' tarkoitetaan tässä yhteydessä esimerkiksi näkemistä / katsomista, lukemista, kirjoittamista, kuulemista ja puhumista.

The purpose of the next questions is to outline how and in which situations you used / used English in a school setting. 'Using', in this case, refers to e.g. seeing / watching, reading, writing, hearing, and speaking.

11. Milloin viimeksi opiskelit englantia kouluympäristössä? / When was the last time you studied English in a school setting? *

○ Opiskelen edelleen (esim. peruskoulu, lukio, yliopisto, ammattikorkeakoulu) / I still do (e.g. basic education, high school, University, University of Applied Sciences)

○ 1 - 2 vuotta sitten / 1 - 2 years ago

○ 3 - 5 vuotta sitten / 3 - 5 years ago

○ 6 - 9 vuotta sitten / 6 - 9 years ago

○ Yli 10 vuotta sitten / More than 10 years ago

12. Seuraavana on listattu joitakin yleisempiä tehtävätyyppejä, joita tyypillisesti käytetään koulun kieltenopetuksessa. Kuinka paljon koet hyötyneesi niistä kouluaikanasi? (1 = ei hyötynyt lainkaan, 3 = hyödyin vähän, 5 = hyödyin paljon)
HUOM! Mikäli tehtävätyyppiä ei käytetty ollenkaan, voit jättää kohdan tyhjäksi! /
The following is a list of some of the most common exercise types typically used in Language Education at schools. How much do you feel you have benefitted from them during your school years? (1 = didn't benefit at all, 3 = benefitted a little, 5 = benefitted a lot)
NOTE! If a certain exercise type was not used at all, you may leave it blank!

	1	2	3	4	5
Kuullunymmärtämisen harjoitukset / Listening comprehension exercises	○	○	○	○	○
Luetunymmärtämisen harjoitukset / Reading comprehension exercises	○	○	○	○	○
Sanastotehtävät / Vocabulary exercises	○	○	○	○	○
Kielioppitehtävät / Grammar exercises	○	○	○	○	○
Keskustelutehtävät (parin tai isomman ryhmän kanssa) / Discussion (with a pair or bigger group)	○	○	○	○	○

	1	2	3	4	5
Kirjalliset tehtävät (esseet, ainekirjoitus,..) / Written assignments (essays, composition,..)	○	○	○	○	○
Suulliset tehtävät (puhe, esitelmä,..) / Oral assignments (speech, presentation,..)	○	○	○	○	○
Teknologia-avusteiset tehtävät (Kahoot, tiedonhaku, pelit) / Technology-assisted exercises (Kahoot, information search, games)	○	○	○	○	○
Musiikin kuuntelu / Listening to music	○	○	○	○	○
Elokuvien katselu / Watching movies	○	○	○	○	○
Videoiden katselu / Watching videos	○	○	○	○	○

13. Puuttuiko listasta jokin tärkeä tehtävätyyppi, josta koet hyötyneesi? / Was there an important media you feel to be beneficial missing from the list?

Lopuksi vielä joitakin yleisiä kysymyksiä koskien englannin oppimista ja sinua englannin oppijana. Toivoisin, että vastaat avoimiinkin kysymyksiin useammalla kuin yhdellä sanalla.

Finally, some general questions regarding learning English and You as a learner of English. I wish You would answer the open questions with more than one word.

14. Oletko SINÄ mielestäsi aktiivinen englannin kielen käyttäjä? Miksi, miksi et? / Do YOU consider yourself to be an active user of English? Why, why not? *

15. Mikä on varhaisin muistosi englannin kielestä? Mihin yhteyteen, tilanteeseen ja paikkaan se sijoittuu? *

16. Minkä asioiden koet edistäneen englannin kielen oppimista koulussa ja vapaa-ajalla? Entä haitanneen sitä? / Which factors do you consider being beneficial to learning English at school and during free time? Which were harmful? *

Appendix 2 – The examples in their original language

Example 1
Edistäneet: ystävien kannustus ja kanssakeskustelijoiden kannustus
Haitanneet: opiskelutyylit alakoulussa ja yläkoulussa. Hyvin paljon kirjallista opiskelua. Opetus eteni
parhaiten osaavien ehdoilla. Olisin tarvinnut eriytystä, mitä ei omina peruskouluaikoina oikein käytetty
yleisopetuksessa.

Example 2
Haittasi koulussa kuulopainoitteiset oppikirjat. Vitutti kun jatkuvasti tuli vastaan kuullun
ymmärtämisiä ja lausumisharjoituksia.

Example 3
Olisin toivonut enemmän esim. brittiläisen viittomakielen tai amerikkalaisen viittomakielen opetusta,
jolloin olisi ollut mielekkäämpää oppia englantia (tukevat toisiaan).

Example 4
Opiskelutulkkien käyttäminen on haitannut opiskelua, sillä vaikka opettaja olisi puhunut englanniksi,
tulkit ovat tulkanneet suomalaisella viittomakielellä enkä ole oppinut siitä mitään. Nykyäänhän
käytetään esim. kirjoitustulkkeja kielten tunneilla ja olen varma, että se on paljon hyödyllisempää kuin
viittomakielen tulkkien käyttäminen.

Example 5
Haittasi kun ensin oli tosi paljon jäljessä kuulevista, tuntui että loisti kieliopissa mutta oli surkea
sanavarasto. Moni oppi automaattisesti tv-sarjoista, minä jouduin erikseen opettelemaan.

Example 6
Rohkaiseva ja innostava opettaja on aina ollut minulle tärkeä tekijä. Myös luokan ilmapiiri vaikuttaa
paljon: hyvän ilmapiirin vallitessa uskaltaa vastata.

Example 7
Edisti kun ope tajusi potentiaalini ja vaati multa enemmän kuin niiltä joita ei kiinnostanut. Yksin
tekeminen toisaalta haittasi motivaatiota.

Example 8
Haitta: lukion huono, epämotivoiva opettaja, joka sai kyseenalaistamaan omat taidot.

Example 9
Hyötyä oli siitä, että koulussa oppi peruskielen muodon ja tuottamisen, ja koulun ulkopuolelta sanastoa
joka täsmää paremmin oikeaan kielenkäyttöön kirjakielen ulkopuolella.

Example 10
Haitta: internet (kieliopin puutuminen ja tekstin rakenteen eroavaisuus "oikeaoppiseen")

Example 11
Koen englannin opiskeluani edistäneen etenkin sellaiset ympäristöt, jotka ovat kiinnostuksen kohteinani
ja ovat luonnollisella tavalla mukana arjessa.

Example 12
kielelle altistuminen pienestä asti esimerkiksi television ja pelien kautta

Example 13
Originally in English

Example 14
Koulussa en varsinaisesti koe oppineeni paljoakaan, vaan olen pärjännyt muualta oppimillani taidoilla.