

# **MASTER'S THESIS**

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Extramural English – What do students learn on their own?

Extramural Engelsk – Hva lærer elever på egenhånd?

Literature Review

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# Preface

Five years have come and gone at Oslo Metropolitan University, and I am soon ready to start a new adventure in the Norwegian lower secondary school. The last five years have entailed much knowledge, and I am looking forward to finally being able to apply all that I have learned, as well as learn even more in the future.

This thesis came to be after many conversations with friends on how we learned English. Many believed that the leading cause for their English skills were their spare time activities. School mostly corrected what they learned on their own, but otherwise provided little relevancy for their learning, they believed. I wanted to investigate whether this held true, and turned to the field of Extramural English, which investigates this phenomenon. If the belief of my friends indeed were true - that students learn most of their English on their own - then that would have great implications for teachers of the English subject.

I would like to thank my project supervisor, Dina Tsagari, for her invaluable help with this thesis. Both matters great and small have seemed easy to solve with her guidance. I would also like to thank my numerous friends who have listened to me ramble on about Extramural English, often without any knowledge within the field. Their input has often helped me out of many headaches (often by giving it to them in exchange, I imagine). Lastly I would like to thank my parents for their support as well. Without all these people and their support, this thesis would not be the finished product it is today.

## **Abstrakt på norsk:**

Barn og unge bruker mer og mer tid utenfor skolen på aktiviteter som eksponerer dem for det engelske språket. Men er det noe læring i dette, og eventuelt hva lærer de? I 2009 stilte Sundqvist et lignende spørsmål, og kom opp med termen "Extramural English", i søken av å finne ut av hvordan elevers fritidsvaner påvirket engelskferdighetene deres. Denne tesen undersøker hvorvidt elever lærer engelsk av aktiviteter utenfor skolen, hva de lærer av, og hva de lærer. Etter å ha undersøkt 27 studier fra de siste 13 årene, så er det liten tvil om at elever lærer mye engelsk av å se på forskjellige former av videoer, høre på musikk og å spille videospill. Både elevenes vokabular og muntlige ferdigheter virker til å ha godt av elevenes fritidsvaner. Forskningen er derimot noe uenig på enkelte felt, som hvorvidt sjanger på musikk eller type spill har innvirkning på læring, og om tidligere evner har innvirkning på utbytte av de diverse aktivitetene. En ting er jevnt over sikkert: Elever på tvers av land og aldre lærer mer engelsk på egenhånd desto mer de eksponeres for språket.

## **Abstract in English:**

Children and teenagers are spending more and more time outside of school on activities which exposes them to the English language. But is there any learning involved, and what do they learn? In 2009, Sundqvist asked a similar question, and came up with the term "Extramural English" in search to find how students' spare time habits affected their English language skills. This thesis examines whether students learn English outside of school, what they learn from, and what they learn. After having examined 27 studies from the last 13 years, there is little doubt that students learn a lot of English from watching different forms of videos, listening to music and playing video games. Both students' vocabulary and oral skills seem to improve in correlation with the students' spare time habits. Research is however somewhat in disagreement in certain fields, such as whether genre of music or types of games affect learning, and whether previous proficiency affects amount of English learned from the various activities. One thing is, however, certain: Students regardless of country and age learn more English on their own the more exposure they have to the language.

## **Index:**

EE: Extramural English.

SLA: Second Language Acquisition.

LK20: The Norwegian Curriculum (Læreplanverket for Kunnskapsløftet 2020)

UDIR: Ministry of Education (Utdanningsdirektoratet).

# Table of contents

- 1 Introduction ..... 1
  - 1.1 Research Questions ..... 1
  - 1.2 Relevance of the Study ..... 2
- 2 Theoretical Underpinnings ..... 4
  - 2.1 Second Language Acquisition..... 4
    - 2.1.1 Input & Output ..... 4
    - 2.1.2 Motivation ..... 5
  - 2.2 Where does EE belong in SLA?..... 6
    - 2.2.1 Grammar..... 6
    - 2.2.2 Vocabulary ..... 7
    - 2.2.3 Oral Skills..... 7
  - 2.3 The LK20 and EE..... 8
    - 2.3.1 Basic skills in the LK20 English curriculum ..... 8
    - 2.3.2 Competence aims ..... 10
  - 2.4 Extramural English in Norway ..... 11
- 3 Method ..... 12
  - 3.1 Data collection..... 12
    - 3.1.1 Inclusion and Exclusion criteria: ..... 12
    - 3.1.2 Databases and Keywords..... 13
  - 3.2 Validity and Reliability in Data Collection ..... 14
    - 3.2.1 Validity ..... 14
    - 3.2.2 Reliability ..... 14
  - 3.3 Limitations and Challenges ..... 15
- 4 Research Findings ..... 16
  - 4.1 Vocabulary ..... 16

4.1.1 Acquisition through Videos .....	16
4.1.2 Acquisition through Lyrics in Music .....	18
4.1.3 Acquisition through Video Games .....	20
4.2 Oral Skills.....	24
4.2.1 Acquisition through Videos .....	24
4.2.2 Acquisition through Lyrics in Music .....	26
4.2.3 Acquisition through Video Games .....	28
5 Discussion .....	31
5.1 Videos.....	31
5.1.1 Videos and vocabulary .....	31
5.1.2 Videos and oral skills .....	33
5.1.3 Comparison of vocabulary and oral skills acquisition through videos .....	34
5.2 Lyrics in Music.....	35
5.2.1 Music and vocabulary .....	35
5.2.2 Music and oral skills .....	37
5.2.3 Comparison of vocabulary and oral skills acquisition through music .....	38
5.3 Video Games .....	39
5.3.1 Video games and vocabulary .....	39
5.3.2 Video games and oral skills .....	40
5.3.3 Comparison of vocabulary and oral skills acquisition through video games.....	42
6 Conclusion.....	43
6.1 Pedagogical Implications of Extramural English.....	44
6.2 Limitations of current study .....	46
6.3 Suggestions for Further Research .....	47
6.3.1 Videos: .....	47
6.3.2 Music:.....	48
6.3.3 Video Games .....	48

6.4 Concluding remarks .....	48
7 References .....	50

# 1 Introduction

"I must have learned more English from other activities like gaming and watching movies rather than from school" is a quote which one perhaps might hear from the educated younger generations. Is there truth to this, or merely a distrust in the school's ability to teach English? Research around the term "Extramural English" sets out to figure out whether there is a connection between what students do in their spare time on their own accord, and their English skills.

This thesis does not set out to research Extramural English, but rather review existing literature, and make suggestions for further research in the field. In Norway, the field appears to be rather lacking. By identifying where the field stands internationally, how it has been researched, and what possible gaps there seems to be in the research can help the field gain a stronger footing.

## 1.1 Research Questions

As previously mentioned, the field of Extramural English will be explored in this thesis. In order to fully examine how much the field has done, the first question to ask is whether the field itself examines a phenomenon which occurs. This question will be answered by examining the link between Extramural activities and English skills. This brings us to the first research question:

- Do students develop their English skills from Extramural English activities?

When discussing "skills" in English, I will focus on the following two types of skills: vocabulary skills and oral skills.



- How does EE improve vocabulary?
- How does EE improve oral skills?

Lastly, the list of Extramural activities can be quite extensive, so I will focus solely on three of the most popular activities amongst young english language learners (SSB 2022)

- How does watching videos, listening to music and playing video games affect English vocabulary and oral skills?

## 1.2 Relevance of the Study

The term "Extramural English" was introduced by Sundqvist in 2009, and means " English outside the walls" (Sundqvist 2009), with the "walls" referring to school. A further definition given by Sundqvist is that Extramural English is the English that occurs without the involvement of the school (Sundqvist 2009), and that it occurs in the students' free time. The idea Sundqvist presents is that this form of interaction with the English Language leads to learning, an idea we can trace back to at least 40 years ago, with Krashen. In 1982 Krashen discussed the idea that classroom learning could never compare to "the variety of the outside world" (Krashen 1982). Krashen also discusses that the ideal would be to live in a country which speaks the second language, as this could lead to an "all-day second language lesson!" (Krashen 1982). It is this phenomenon we might experience today, where second language exposure increases with media exposure (SSB 2022).

The term "Extramural English" can be compared to many similar terms, such as "incidental learning", "out-of-school learning" and "unintentional learning". However, whereas these other terms are narrow in definition, Extramural English aims to be somewhat broader (Sundqvist and Sylvén 2016) and acts more as an umbrella term. This is due to the fact that the narrowness of the other terms restricts them. For example, "incidental learning" or "unintentional learning" suggests that learning was not the intent of the student. Extramural English however, seeks to examine both intentional and unintentional learning (Sundqvist 2009). "Out-of-school learning" allows for the learning to be initiated by the school or a

teacher, which Extramural English does not seek to examine (Sundqvist 2009). Activities in English done by students without the involvement of school, regardless if they are done intentionally or unintentionally are relevant.

Students nowadays are exposed to many sources of English, and their English competence is steadily on the rise (Birketveit and Williams 2017). Online media is especially popular amongst teenagers (SSB 2022). In certain countries, such as Norway, the English subject is given little time each week, with as little as two hours per week. When there are few hours every week for a subject, then spending those hours efficiently becomes important. Knowing what students learn on their own can help in choosing what to focus on. If students are less likely to learn within a certain topic or field in their spare time, then the teachers can spend their lessons on these fields.

Extramural English is a way of understanding how students' spare time activities influence their English language proficiency. This occurs both online and offline (Sundqvist 2009), but given that students' online media consumption continues to rise (SSB 2022), the online side of Extramural English is especially interesting. The English subject in Norway has a few hours each week. Therefore utilizing these hours optimally becomes important. By knowing what students learn on their own, a teacher could perhaps make better use of the few hours they have in the subject. This thesis will examine whether there is a correlation between students' spare time activities, and their English language proficiency. Vocabulary and oral skills will be the primary skills examined.

## 2 Theoretical Underpinnings

In this chapter, we will examine where Extramural English belongs in the English Language field. To accomplish this, we will discuss Second Language Acquisition, with a focus on input, output and motivation. Then English language skills will be discussed, followed by how Extramural English has been used in Sweden, and how this knowledge can be applied in the Norwegian context.

### 2.1 Second Language Acquisition

#### 2.1.1 Input & Output

Theories on Second Language Acquisition is a broad field. Some keywords are often repeated throughout research, such as input, output and motivation. Input and output are often highlighted as an important part of language learning, as the two are usually in a constant intertwining circle. There are many forms of input and output (Harmer 2015), and what input the student receives affects what they in turn can output, this in turn leads to new input. An example of this can be in conversation. The student listens, which leads to them having to answer. Then the learners' answer gets answered again, leading to the cycle continuing (Krashen 1982). The circle of input and output can also be observed in other situations, such as writing. A student can write a task in school, receive feedback from their teacher (the input), and then change future output accordingly (Harmer 2015). Both input and output are considered important. Input, whether it be written or oral, exposes the learner to the language. The output makes it possible to identify gaps in the learners knowledge of the language (Flognfeldt and Lund 2016).

Extramural English can be a natural approach to input and output. Having students meet authentic English can give them some of the best practice available (Harmer 2015), seeing as little to no effort is given in making the language easier for the learner. At the same time, this can also make learning more difficult and demotivating. When a teacher wants to use authentic material, they should aim to challenge the students with material that is somewhat more advanced than the students themselves (Krashen 1982), while also ensuring that the difficulty is nonetheless achievable (Harmer 2015). When students engage in EE activities,

the teacher is no longer part of the process, and the students themselves decide upon what material they find interesting. There is no guarantee that students will engage in challenging language. Individual differences has been observed, with some students going for challenges, and others skipping them (Jensen 2019). We cannot say for certain whether the appropriate level of English is being engaged with by the students in EE activities, but the average student does engage in a lot of EE activities (SSB 2022).

### **2.1.2 Motivation**

Motivation is a large factor for learning (Harmer 2015). In classrooms, it has been found that if students fail to see the relevance of the subject, then the job of the teacher became more difficult, as compared to a classroom where the students saw the relevance (Sundqvist and Sylvén 2016). Authenticity is often brought up as an important factor for learning (Harmer 2015), and the usage of authentic texts and videos could help student motivation. By using this knowledge of students' motivation, teachers could use what they already know from outside the classroom and help them see the connection. Music can, for example, be used to achieve this: If the teacher has a lesson on American History, then some American popular music could be used to help enlighten the situation. Music could also be used to explain cultural traits of a country, by looking at genres. Thus, bringing something familiar into teaching could help students be more motivated for the tasks.

Extramural English is, when it comes to motivation, in a peculiar state. For some students, motivation in the subject rivals and trumps even that of their L1 (Brevik and Hellekjær 2018), to the point of grades in English excelling grades in L1. Once again, the need for relevancy in motivation is addressed. Students can identify themselves what they find to be relevant, and if the teacher does not help them with this, then teaching could become difficult (Harmer 2015). Additionally, when students interact with Extramural English in their own spare time, it should not be too big of a leap to assume that they have some form of inner motivation for doing so. Perhaps they enjoy the content they are consuming, perhaps they want to know what others find interesting. If a teacher can use this motivation for good in the classroom, without polluting the motivation outside of the classroom, then perhaps both motivation and students' view on task relevance could rise. Extramural English can be a source of both input and output (Sundqvist and Sylvén 2016). Therefore one can theorize that EE activities can lead to learning. Additionally, motivation is an important factor for learning (Harmer 2015). Students seeking out situations where they

can learn English on their own could have pedagogical implications. Understanding what skills students learn and develop from their EE activities becomes important if they indeed do learn from their spare time activities.

## **2.2 Where does EE belong in SLA?**

The former part of this chapter has discussed the role of Extramural English in general Second Language Acquisition. The following part of this section will have a closer look at grammar, vocabulary and oral skills, as these are both important parts of Second Language Acquisition (Harmer 2015), and the fields that have the most research within Extramural English.

### **2.2.1 Grammar**

Although grammar is not the main focus of this thesis, it is a big part of Second Language Acquisition. Teaching grammar has many approaches. Scott Thornbury (Thornbury 2015) discerns the various ways of teaching grammar in two categories: the deductive approach, and the inductive approach. These refer to learning grammar from rules or from examples (Thornbury 2015). The inductive approach is especially interesting to have a closer look at through an EE lens. There are different degrees of inductive learning, all the way from no teacher intervention to some degrees of teacher intervention. It has been found that some form of intervention from the teacher however is necessary for optimal grammar learning (Thornbury 2015). Letting the students free without any guidance does not result in optimal learning. Letting the students learn by themselves and then correcting or intervening seems to be the better of the inductive approaches, and thus can be applied to the world of Extramural English. If students read, listen to music or watch movies in their spare time, and then the teacher helps them better understand the context of the grammar, then that could help them further their grammar skills.

Context matters in grammar learning (Thornbury 2015). Extramural English by nature gives students a great many different examples of grammar in the wild being used in different

contexts. Music, film, series and video games are all examples of EE activities (Sundqvist and Sylvén 2016) that can offer great variety in grammar, both spoken and written. Vocabulary learning and grammar can be argued to be similar, as they are quite interdependent (Flognfeldt and Lund 2016). Learning theories for vocabulary, and learning in general, often give importance to repetition. Repetition, rehearsing and recycling of words in different contexts is key for learning (Flognfeldt and Lund 2016).

### **2.2.2 Vocabulary**

Students gain a greater vocabulary by listening to or reading new words and phrases often. As mentioned, repetition over time is key for vocabulary acquisition and grammar learning (Flognfeldt and Lund 2016) as well as a need for this repetition to be different in order to achieve greater learning. Students' time spent on activities that can be defined as EE activities is steadily increasing (SSB 2022) and they are likely to encounter a variety of new words and phrases. Music, movies, series and video games are all examples of Extramural Activities (Sundqvist and Sylvén 2016). These EE activities all have different genres where the spoken and written language differs. Correlations have been found in vocabulary and time spent on EE activities (Sundqvist 2009). When combined with SLA theories about input and output, one can see how a lot of input - and even some output - in students' spare time could lead to increased vocabulary.

### **2.2.3 Oral Skills**

Both listening and speaking are interdependent when working with oral skills (Munden 2016). Earlier in this thesis the cycle of input and output that Krashen (Krashen 1982) developed was mentioned. Listening and speaking can be seen as forms of input and output, respectively. Krashen also discusses how output is used to identify gaps in SLA (Krashen 1982), and in oral skills missing gaps can be easier to identify quickly (Harmer 2015). Most of EE activities that have to do with oral skills are primarily input (Nimani and Dagarin 2019), with few students engaging with EE oral activities via output. Being aware of this difference in input and output could and perhaps should influence the teacher when preparing English as a Second or Foreign Language classes. Students have a need for authentic input in their learning

(Harmer 2015), yet EE might fill most of this need for a majority of the students by having a great variety of different forms of input.

Proficiency in oral skills are also dependent on proficiency in vocabulary (Munden 2016). Additionally, as discussed in section 2.2.1, vocabulary is also dependent on grammar. Collectively, language skills require the different fields to develop somewhat similarly (Harmer 2015). When students find their own forms of input, it is the job of the teacher to assess their students' competence, and how to best teach them how they need to improve (Slemmen 2010). This applies to all fields of SLA, but especially oral skills, seeing how this is where students are least likely to have output on their own (Sundqvist and Sylvén 2014). This puts EE in a particularly peculiar spot when discussing oral skills, as opposed to grammar and vocabulary, where research suggests a stronger link between EE and the learning field.

Students' grammar, vocabulary and oral skills could possibly be developed by EE activities. For the sake of this thesis, only vocabulary and oral skills will be examined further. This is due to several factors. Firstly, grammar and vocabulary skills are often learned at the same time from similar activities (Thornbury 2015). Secondly, this thesis aims to examine whether EE activities can develop different English language skills. Examining two similar skills would counteract this goal.

## **2.3 The LK20 and EE**

In the Norwegian context, we must look at the role of Extramural English when applied to the LK20. After all, if it becomes apparent that Extramural English does not fit in with the general aims and competence aims of the LK20, then the field in itself should be reconsidered in the Norwegian classroom and context.

### **2.3.1 Basic skills in the LK20 English curriculum**

Oral Skills is the first among the "basic skills" mentioned in the LK20 (Kunnskapsdepartementet 2019). Speaking, listening, conversing, adapting to situations and

choosing approaches are all highlighted as important skills within oral skills. This coincides with what we have previously discussed in this thesis, with especially input/listening being a big part of Extramural English. We will be discussing this in more detail later in this thesis, but already we can see the relevancy Extramural English can have when applied to the LK20.

Writing skills follows oral skills, and the first sentence in the section states that:

*"To write in English is to be able to express ideas and opinions in a understandable and purposeful way in different types of texts, on paper and digitally" (Kunnskapsdepartementet 2019)*

Following this, the importance of planning for situation, recipient and adapting communication based on context is established, similarly to the section on oral skills. Output is naturally the focus of this section, yet how to identify what form the output is to be done in which situations is not explicitly mentioned. Could this, perhaps, be where the input which Extramural English brings is relevant? By being given authentic experiences with how others, and usually native speakers, approach different writing situations, one can use this experience on one's own writing. Being critical to sources is also included, as well as the importance of understanding how to use sources critically.

Reading skills is the last of the "traditional" skills that the LK20 details. Similarly to oral and writing skills, both digital and non-digital forms of reading is to be included (Kunnskapsdepartementet 2019). A focus is also given to implicit and explicit understanding while reading, conveying that not simply reading is the goal, but also a greater understanding of the reading done. Aspects of grammar are highlighted, such as spelling and going from understanding rules for spelling, to reading complex texts, as well as reading critically.

Lastly, digital skills is given equal importance to the "traditional skills" of oral skills, writing skills and reading skills. The reasoning within the LK20 is quite interesting to look further at:

*"Digital skills in English is to use digital media and resources to strengthen language learning, to engage authentic language models and conversation partners in English and to acquire relevant knowledge in the English subject." (Kunnskapsdepartementet 2019)*



Although Extramural English is not explicitly a digital phenomenon (Sundqvist and Sylvén 2016), the majority of its occurrence is enacted in digital contexts. Additionally, Extramural English is the phenomenon that occurs without school interference (Sundqvist 2009). When digital skills are included in the curriculum, and the General Part of the LK20 explains the importance of "learning to learn" (UDIR 2017), then Extramural English becomes highly relevant. If one of the goals of the Norwegian school is to teach the students how to learn by themselves, then Extramural English can be one approach to meet this goal. Especially when within the LK20 for the English subject, digital skills are given equal importance to oral, writing and reading skills.

### **2.3.2 Competence aims**

In this section we will examine the competence aims for 10th grade, as this is where obligatory education ends in Norwegian Schools. Some competence aims in the LK20 might find Extramural English more relevant than others. Some are clearly related, such as the aim "use different digital resources and other aids in language learning, text creation and interaction" (Kunnskapsdepartementet 2019). As mentioned earlier, Extramural English is not strictly online, yet will often occur online for students. Therefore, competence aims that discuss using the internet can help verify the need for Extramural English. The same can be said for competence aims which entails communication, as much of students' time spent online is on some form of communication, whether it be input or output (SSB 2022).

The cultural aspect of the LK20 is an important one to view with regards to EE. One of the aims states that the student is expected to "describe and reflect over the role English has in Norway and in the world" (Kunnskapsdepartementet 2019). Statistics indicate that Norwegian youth spend more and more time on media (SSB 2022), and we can hypothesize that with this rise in media consumption, the amount of English they encounter also goes up. As we will discuss further in the literature review, many forms of incidental English can be viewed as a form of Extramural English. With this in mind, competence aims concerning the discourse around the English Language and its effect on students' lives can be understood better when looked upon with Extramural English in mind.

## 2.4 Extramural English in Norway

In this chapter, we have tried to pinpoint where in the field of Second Language Learning Extramural English belongs. This has been done by examining Extramural English through theories in input and output. With Krashen's model of continuous input and output (Krashen 1982) we can theorize that the need for input and output in Second Language Learning can be met by Extramural English activities. To then help the students along and understand what they need for further advancement is the job of the teacher (Harmer 2015). Motivation also plays a key role in language learning, and as a subcategory of motivation, relevancy is important (Flognfeldt and Lund 2016).

Language skills such as grammar, vocabulary and oral skills have been discussed in section 2.2. An interdependence of some skills, such as grammar and vocabulary can be seen (Harmer 2015). Grammar is the first step from which language learning can happen (Thornbury 2015). Further, the relevancy of the LK20 has been discussed, and there are multiple overlaps with EE and the LK20, especially with goals revolving around culture and communication (Kunnskapsdepartementet 2019).

Extramural English can help teachers understand incidental language learning. EE can be a source of both input and output of English, which needs to be accompanied by the teachers' guidance (Harmer 2015). It can also be a gateway to understanding cultures outside one's own, as well as understanding one's own better. Much of what Extramural English is can also be relevant to the LK20, especially with the goals revolving around digital skills, understanding of culture and communication skills. EE is in an interesting position as a source for learning, as it is not a teacher mediated method (Sundqvist 2009), or a teaching method at all. Research has been done on Extramural English in Sweden, and given how close Sweden and Norway are culturally, much of the findings could be applied to Norway as well. Extramural English can in other words be a way to understand a newer form for incidental or unintentional language learning which occurs in many students, which allows them to improve their language skills through both input and output, and with a new inner motivation. Understanding the "what" and the "how" Extramural English achieves English language learning is the goal of this thesis.

## 3 Method

### 3.1 Data collection

Although the term Extramural English was established in 2009 (Sundqvist 2009), its idea has been researched through other terms, such as "out-of-school learning" and "incidental learning". Even Krashen in 1982 had similar ideas of Extramural English (Krashen 1982). Nonetheless, this thesis will focus on research done after the inception of the term Extramural English. This will be done mainly because the technological advances and globalization the last ten to fifteen years changes the approach to the topic. As explained in the introduction, other similar terms can also be viewed as Extramural English, and are therefore a part of the inclusion criteria.

#### 3.1.1 Inclusion and Exclusion criteria

Extramural English is an umbrella term for terms such as "incidental learning". Therefore studies on similar topics were part of the inclusion criteria. Additionally, as the term "Extramural English" had its inception in 2009, studies should be from 2009 and onwards. Not only because of this, but also because a smaller gap in time between research means that they should be more related to each other. Especially as many of Extramural English activities are online, and access to online activities are more similar the last 13 years than they are the last 20 to 30 years. Additionally, studies which were conducted in a school setting could be included, if the activity done could be replicated by the students in their own spare time. These studies were included so that in-school and out-of-school studies could be compared and discussed. Average age of participants should not exceed 20, as the participants should have similar technological conditions. For example, the availability and use of the internet was not as wide in the 90's as it was in the 2010's. Studies had to be peer reviewed to be included, to ensure quality of the study.

**Inclusion:**

Research must be from 2009 and onward. The research must be connected to EE, either directly or through similar terms such as "incidental learning" or "out-of-school learning". English had to be the participants L2.

**Exclusion:**

Studies from 2008 and earlier were excluded. Dissertations and thesis' were also not included. Many studies on university students included students with an average age of over 20, these were therefore not included.

### **3.1.2 Databases and Keywords**

Two databases were primarily used: Oria and Scopus. These gave both similar and different results when similar keywords were used, and therefore a somewhat greater amount of sources were found. Sources that appeared on both sites became somewhat "safer" sources. Several searches were conducted on both sites. The first search was naturally on "Extramural English". Few sources were found, and not all complied with the inclusion criteria. Therefore, an additional search was conducted, with the keywords: "Incidental learning", "EFL" or "ESL", and "vocabulary" or "oral skills". This yielded many results. These results were then tested against the inclusion/exclusion criteria.

Double-checking of the studies often revealed that they did not fall into the inclusion criteria, and this led to many potentially relevant studies being excluded, often due to the age of the participants. As a consequence, certain topics ended up with significantly less studies, and thus another round of searches was done. The keywords "video(s)", "music" or "song(s)" and "video games" were added to the existing keywords, and yielded some new results.

## **3.2 Validity and Reliability in Data Collection**

### **3.2.1 Validity**

The way data has been collected for this thesis needs to ensure validity. Data is only valid if it is relevant, and has to do with the topic (Thurén 2021). There are multiple ways to ensure validity. Face validity is one such way, and is in this case assisted by journals and the peer-reviewed status of research. By establishing face validity - or common sense as some call it (Christoffersen and Johannessen 2012), we can assess the validity of research by asking simple questions. In the case of this thesis, the main question asked for validity during data collection was "Is this relevant to Extramural English, and to vocabulary and oral skills in second language learning?". To further expand upon this, an additional question was asked to ensure validity: "How does this data compare to data from similar countries, and different countries?", with "different" meaning regionally and culturally. For example data from different Scandinavian countries can be seen as similar, while studies from European and Asian countries can be assumed to be different.

Seeing how both in-school and out-of-school studies can be included, there is a potential for the weakening of validity, as in-school studies not necessarily are relevant to this thesis. A study does however not need to be directly linked to an out-of-school context to be relevant. Having grounds for comparison between in-school and out-of-school studies can make the in-school studies relevant and valid studies for this study (Thurén 2021). If an in-school study examines the same as out-of-school studies in a similar way, then it might be relevant although it is not directly linked to Extramural English.

### **3.2.2 Reliability**

Part of the inclusion of inclusion and exclusion criteria is to ensure that others doing similar studies can see whether they conclude the same as this thesis, thus increasing its reliability (Thurén 2021). It is by sticking to these criteria that the reliability increases, seeing how the same method can be used by others. Similarly, being transparent about the use of keywords achieves this reliability. Additionally, a representative amount of studies needs to be researched so that the findings become reliable (Thurén 2021). Seeing how multiple studies

appeared across two databases when using the same keywords, one could argue that this gives those keywords a degree of reliability.

A form of test-retest-reliability was also employed to an extent. The way this was done was firstly by the aforementioned search across two databases, as well as multiple searches being done at different times (Christoffersen and Johannessen 2012), To add to this, seeing as part of the inclusion criteria was for the studies to be peer-reviewed, one can assume that the process it takes to peer-review a study helps with its reliability.

### **3.3 Limitations and Challenges**

Certain limitations and challenges were handled through the acquisition of relevant studies. The first challenge was that the term "Extramural English" did not yield many results on SCOPUS or Oria. The results that this term did yield were not always relevant either. Therefore, as Extramural English can be seen as an umbrella term for similar terms (Sundqvist 2009), new searches with those terms were done. Mainly "incidental learning" and "out-of-school" were used. This yielded many more results, which were then examined with the inclusion/exclusion criteria.

One of the inclusion criteria, namely the age restriction, also lead to limitations. Many relevant studies had to be omitted due to this inclusion criteria. A lot of studies where the participants were university studies were excluded, which lead to much less studies to examine. However, to ensure validity, this process was necessary.

## 4 Research Findings

### 4.1 Vocabulary

This chapter will review and discuss the findings of research papers which all revolve around vocabulary and Extramural English. Three forms of Extramural English will be examined: videos, music and video games. These activities have been chosen because they are three of the most popular Extramural activities (SSB 2022) among teenagers. The research papers will be presented in chronological order.

#### 4.1.1 Acquisition through Videos

The first study in this section is from 2010, written by Stuart Webb, and analyses movie scripts (n=143) in order to determine whether words are encountered 10 or more times. Webb discovered that few movies fulfilled this criteria on their own (Webb 2010). However, when multiple movies were analysed, more words started appearing 10 or more times. This led Webb to conclude that if learners regularly watch movies over time, then incidental learning is more likely to occur (Webb 2010). Although no students were involved in proving this hypothesis from Webb, we know already that repetition and exposure over time often leads to learning (Flognfeldt and Lund 2016), and thus, this by Webb is relevant to the field of Extramural English.

The next studies involve students and vocabulary acquisition through watching videos. Specifically, the studies seek to answer whether captioned videos are better for vocabulary acquisition or if any alternate captions or no captions are better. Kuppens studied whether self-reported use of English media had any effect on vocabulary (Kuppens 2010). The answers of Flemish students (n=374) in their last year of primary education were analysed, and Kuppens discovered that there was a positive correlation between students who watched subtitled videos (Kuppens 2010). Other research also find a positive correlation between watching L2 videos with L2 captions. In a meta-analysis from 2013 where 10 studies were analysed, the same conclusion was drawn: captions help learners with vocabulary acquisition

(Montero Perez, Van Den Noortgate et al. 2013). Additionally, this meta-analysis also found proficiency level to not be a factor for learning through captions.

Thus far, the studies have only found positive effects in viewing L2 videos with L2 captions. This trend continues in a study on Norwegian teenagers, where it was found that viewing L2 videos with L2 captions had a positive effect on both vocabulary and grammar learning (Vulchanova, Aurstad et al. 2015). However, this study also found that viewing L2 videos with L1 captions had a negative impact on the post-tests on comprehension (Vulchanova, Aurstad et al. 2015). Additionally, a positive correlation was found between higher proficiency level and higher effect from the L2 captions. Interestingly, this contradicts the meta-analysis previously discussed from 2013. Positive correlation between video and captions can be found in greatly different countries. In a study from Hong Kong in 2019, grade 6 students (n=257) were found to have greater vocabulary learning when viewing L2 videos with L2 captions (Teng 2019). Following this, the students had less vocabulary learning from L2 captions which only had keywords, and finally no captions were found to have the least amount of learning (Teng 2019).

Lastly, in a study from 2022, Teng examined whether learner-related factors such as proficiency level and language aptitude had any effect on learning from captions on videos. Chinese learners (n=82) aged 18-20 were randomly assigned into two groups, one with captions and one without. The results indicated that the group with captions learned more vocabulary than the group without captions, regardless of proficiency level (Teng 2022). Teng also discusses how the potential of online streaming with captions could lead to incidental vocabulary learning.

With these studies in mind, much evidence points towards watching L2 videos with L2 captions bringing greater vocabulary learning than watching videos with L1 captions or no captions, with even L1 captions being found to have negative impact (Vulchanova, Aurstad et al. 2015). However, most studies conclude that watching L2 videos at all increases students' vocabulary skills. Watching L2 videos without subs usually gave the least increase in vocabulary. Watching L2 videos with L1 captions saw a greater increase in vocabulary skills, while L2 videos coupled with L2 captions saw the greatest increase in vocabulary skills. For students, this means that watching L2 videos with L2 captions at home could lead to more incidental vocabulary learning. For teachers, when showing videos in class, using L2 captions seems to be the best option.



Multiple studies found existing proficiency level to not be a factor for learning through videos (Montero Perez, Van Den Noortgate et al. 2013) with captions (Teng 2022), while others found that proficiency level turned out to be a factor for learning (Vulchanova, Aurstad et al. 2015). Clarifying this difference by accounting for variables such as age and country could lead to interesting pedagogical implications. Further research into if this occurs across ages and countries could be an interesting continuation within the field.

#### **4.1.2 Acquisition through Lyrics in Music**

As discussed in 2.2.1 and 2.2.2, repetition over time is an important factor for Second Language Acquisition (Flognfeldt and Lund 2016). Songs with lyrics, especially pop songs can be repetitive in nature, thus they might be a venue for language learning. Norwegian students listen to a lot of music in their spare time (SSB 2022). Therefore, examining whether students can learn vocabulary through the EE activity of music becomes relevant.

Kuppens' research on incidental vocabulary acquisition from media exposure also tried to find a connection between music exposure and vocabulary acquisition. However, no significant correlation was found in the data collected (Kuppens 2010). There was no doubt that music was the most popular Extramural activity amongst the students, with 90% of the students listening to music three or more days of the week. This activity being popular could lead to it being more difficult to find a definitive answer of whether music as an activity can lead to vocabulary acquisition.

In a study from Spain, preschoolers were studied in order to determine whether they learned any vocabulary from songs. The children (n=25) were exposed to a song three times in lessons lasting thirty minutes. Five weeks later, a post test was issued to see if any vocabulary had been retained. 68% of the children had learned one to five words (Coyle and Gómez Gracia 2014). 32% had not learned any words. It is mentioned that during the five-week period before the post-test, the children were not singing the same song in their usual lessons. Coyle & Gómez Gracia also suggest a higher frequency of exposure might lead to greater vocabulary gains. If we are to apply this to the previous study discussed, the Flemish

students studied by Kuppens could have learned vocabulary incidentally through music, given that they had such a high exposure rate throughout one week (Kuppens 2010).

More conclusive results were achieved in a study on learners from Thailand in 2019. 300 students aged 10 to 14 participated. Results indicated that repeated listening to a song leads to vocabulary gain (Pavia, Webb et al. 2019). Two songs were used, and the second song seemed to give greater learning. Several reasons are given by the researchers as to why this might be. They argue that learning through song can be like learning through reading, and that reading multiple texts leads to better vocabulary acquisition rather than reading one text multiple times. It might have been that the vocabulary of the second song was easier than that of the first song. All the same, a positive correlation was found between listening to songs and vocabulary learning (Pavia, Webb et al. 2019).

The last study included in this thesis on music and vocabulary learning is a meta-analysis on the topic. 28 studies were analysed, and findings indicate that learners who received instruction with English songs outperformed those who did not (Murphy Odo 2021). A main reason as to why this could be the case, was because songs often are found to be repetitive. Type of genre also seemed to have an impact on learning. Reasons for this could be both motivation and interest from the students. Age also seemed to be a factor for learning, whereas there was a positive relation between older age and more learning from songs (Murphy Odo 2021). This last finding supports what multiple studies on videos and vocabulary also found: that greater prior proficiency can help achieve greater vocabulary learning (Vulchanova, Aurstad et al. 2015). In summary, this meta-analysis by Murphy Odo D finds a positive relation between listening to music and vocabulary learning in a school context, which in turn perhaps can be applied to an Extramural context.

To summarize this section on music and vocabulary acquisition, we will discuss the findings all together. Additionally, we will review possible reasons as to why such a small amount of research was found. Firstly, the general consensus seems to be that regular exposure to music helps (Coyle and Gómez Gracia 2014) with vocabulary (Pavia, Webb et al. 2019). This coincides with general second language acquisition knowledge, in that exposure over time should help facilitate learning (Flognfeldt and Lund 2016). The studies examined, reviewed music as a tool in the classroom. In an Extramural context, we need to consider whether this can be applied to outside the classroom as well. Given that we know a) that many students are exposed to a lot of music on their spare time (SSB 2022), and b) exposure over

time leads to learning (Flognfeldt and Lund 2016), we can hypothesize that this can be applied to an out of school context as well. Further research could further examine music as an EE activity, and its impact on vocabulary skills. This could be done by combining a questionnaire to the participants with a vocabulary test. Checking whether participants who score high listened to a lot of music could yield relevant results.

As to how there came to be so few studies found on the topic, there are multiple possibilities. The first being that the keywords and way of searching for relevant data was flawed. Although, as mentioned in the methods section, multiple revisions of keywords were applied to fields where few relevant results were found, this might not have been enough. The second possibility is that there is little research done on music and vocabulary learning. This does however fall somewhat flat, as one of the studies found was a meta-analysis on the topic, giving more credence to the first theory.

### **4.1.3 Acquisition through Video Games**

As with movies and music, video games have different genres. What separates video games, however, is that some of their genres inherently are social. Multiplayer and namely the MMO (massively multiplayer online) genres often require socialization. In a learning context, this means output from the learner is required. Therefore, understanding the role video games have on language learning becomes relevant, and could have pedagogical implications.

Kuppens' research on incidental vocabulary acquisition from media exposure also examined video games as a factor. In their study, it was found that video games positively influenced vocabulary (Kuppens 2010). Kuppens further discusses that compared to their findings on watching videos and vocabulary learning, video games in this case were not accurately distinguished from each other. Whereas television and movies were separated, video game genres were not.

Amount of time spent playing video games is also found to be an important factor. In a study from 2012, Sylvén and Sundqvist sought to find a correlation between time spent playing, types of games played and reading, listening comprehension and vocabulary in

Swedish learners (n=86). These students were categorized into three groups based on time spent playing per week, with nongamers (0h/week), moderate gamers (<5h/week) and frequent gamers ( $\geq$ 5h/week). The findings found that the frequent gamers outperformed the other groups in vocabulary tests (Sylvén and Sundqvist 2012). Interestingly, more boys were found to be in this group, and their preferred game type was either multiplayer or MMO (Massively Multiplayer Online), which could be a factor to their increased vocabulary learning.

In a later study from 2015, Sundqvist conducted a similar study on Swedish teenagers (n=80). The results again showed that the frequent gamers had best grades and scored best on vocabulary compared to the other groups (Sundqvist and Wikström 2015). The nongamers group scored second best, with the differences being small between nongamers and frequent gamers. Interestingly, the frequent gamer group was exclusively male, and the nongamer group was predominantly female. This difference in gender could be due to many reasons, but in both studies, it is speculated by the researchers that it could be due to interest - girls tended to favour single player simulation games, and boys tended to favour some form of multiplayer games.

In a study from 2019 on Swedish learners (n=1085), Sundqvist found further evidence that there is a connection between time spent on video games and vocabulary learning (Sundqvist 2019). Additionally, Sundqvist explored whether genre of games had any effect. The findings concluded that time spent playing video games had a positive effect on vocabulary scores, with the most frequent gamers having the highest scores, and the least frequent gamers having the lowest scores (Sundqvist 2019). As to genres, it was concluded that there could be a connection between genre and vocabulary, but not one that could be claimed with certainty. This connection would be whether multiplayer games and grade of interaction required within the genre leads to more vocabulary learning than single player games. Second language acquisition requires both input and output (Krashen 1982), therefore it makes sense to conclude that games requiring more communication would give greater learning than those that do not. Sundqvist suggests further research should be done into this topic. In other parts of the world, the same results are found in similar studies. In Iran a study was conducted in 2019, which sought to find whether playing a commercial game could lead to vocabulary learning. Results showed that those who played the game significantly outperformed those who did not (Janebi Enayat and Haghghatpasand 2019). A single player game was played, and during interviews, all of the participants agreed that video games could

lead to better vocabulary learning, even the participants who did not enjoy playing themselves. Interestingly, Janebi Enayat and Haghghatpasand also discuss the use of captions in the video game, and how both they believed this could have helped the participants. We have already seen many studies find a correlation between captions on videos, and so it is interesting to see this idea applied to video games as well.

A meta-analysis study from 2020 by Wu, Zhang and Wang compared the vocabulary learning effect of video games across regions. 74 studies from Asia, the Middle East, Southeast Asia, Europe and English-speaking countries were compiled. The results indicated that video games had a significantly positive effect on vocabulary learning (Wu, Zhang et al. 2020). Wu, Zhang and Wang also examined whether games on the computer or mobile phone had the best effect, and determined that computer games appeared to bring greater learning, possibly due to the screen being bigger. Expanding on this, they also examined whether game complexity, or "richness" as they call it, had any effect as well. Games that fell in the middle category of "rich", and not "generally rich" nor "very rich" were found to bring greatest learning (Wu, Zhang et al. 2020), indicating that too little or too much stimuli could dampen the learning.

The genre of adventure games was studied by Chen, Hsu, Chen & Todd in 2021. Similar to the study by Janebi Enayat and Haghghatpasand in 2019, they sought to find out whether playing an adventure game would lead to vocabulary learning. Their participants were Taiwanese students in their late teens (n=62). These students were divided in two groups: one received a post gaming vocabulary exercise, the other did not. Both groups were found to have significant vocabulary gains (Chen, Hsu et al. 2021), and additionally the group which received the post gaming exercise had greater gains. For an Extramural English context, a post test would not be relevant, but it is interesting to see that working with the vocabulary post-gaming leads to greater learning. Perhaps more natural approaches, such as discussing the game and its contents also could lead to learning post gaming.

Much of Extramural English activities has to do with input. In a 2021 study, Calvo-Ferrer and Belda-Medina studied the effect of the hit game Among Us and L2 vocabulary. In this multiplayer game, the players have to communicate with each other to win, requiring output from the students. The participants were Spanish students (n=54) aged 16 to 18. Certain words are commonly used in order to communicate, and these words were often repeated, which in turn lead to the students learning them after playing (Calvo-Ferrer and

Belda-Medina 2021). Contrary to earlier findings by Sundqvist, no gender differences were found in this study. This could be due to the testing of the effects of Among Us being done by the researchers, and not something the students did in their own spare time.

What most of the studies conclude is that there is a positive correlation between playing video games and vocabulary learning. This appears to be true regardless of country. There are however other differences worth noting. Some of the studies encounter gender differences, whether it be in time played or types of games played (Sylvén and Sundqvist 2012). Others find no gender differences (Calvo-Ferrer and Belda-Medina 2021). Types of games are discussed amongst multiple of the studies, but no clear answer is found whether types of games have any effect on vocabulary (Sundqvist 2019). Some of the studies focused on singular types of video games, such as adventure games (Chen, Hsu et al. 2021). Additionally, one of the studies discussed the use of captions (Janebi Enayat and Haghghatpasand 2019), which we have already seen has a positive effect on videos in general. Further research could be done on captions in video games and their effect on vocabulary acquisition. Similar methods to the ones seen in this chapter could be done, with participants playing a game with captions and performing vocabulary tests before and after on target words. Additionally, differences in L1 and L2 captions could be examined, as many video games often offer L1 captions for many languages.

The studies in this section have both a broad geographical gap and an age gap, indicating that video games can lead to vocabulary learning regardless of age and country. Most of the studies also conclude by suggesting that teachers in school should encourage interaction with video games as a media, as there usually is a positive relation between playing video games and vocabulary skills in English. There is also found to be a connection between gender, types of games played and vocabulary acquisition. Boys tend to play more games in general (Sundqvist 2019), and it is hypothesized by many that games with various degrees of multiplayer might be better for vocabulary than single player games. This could be due to the output students conduct when playing various multiplayer video games. Games allowing for both English input and output could have greater potential for learning than video games that do not. This is due to both English input and output being important for Second Language Acquisition (Harmer 2015).

## **4.2 Oral Skills**

Oral skills can be described as both speaking and listening (Munden 2016). In the LK20, both speaking and listening are used to describe parts of communications (Kunnskapsdepartementet 2019). Therefore, in the following section, studies examining both speaking and listening skills acquired from watching videos, listening to music and playing video games are examined.

### **4.2.1 Acquisition through Videos**

Kuppens' research also examined the acquisition of oral skills. The participants were tested orally, meaning that their speaking skills is what the results are based upon. As such, the findings will be somewhat similar to what was previously discussed. When faced with the oral translation test, students who watched English-subtitled television and movies scored well (Kuppens 2010). Seeing as it was the translation that was interesting for the researcher to study, we can add that their oral skills allowed for them to properly communicate their knowledge.

A meta-analysis was performed in 2013 by Montero, Van Den Noortgate and Desmet, where they studied whether watching videos with captions had any effect on both listening comprehension and vocabulary learning. 15 studies on listening comprehension were analysed. The findings indicated a large effect on listening comprehension from captions (Montero Perez, Van Den Noortgate et al. 2013). The researchers discuss the interdependent relationship between listening comprehension and reading skills in this case, and how reading skills can help with listening comprehension (Montero Perez, Van Den Noortgate et al. 2013) when met with captioned videos as opposed to non-captioned videos. Little to no connection between proficiency level and listening comprehension was found by the researchers.

Whereas most research presented thus far has found a positive relation between watching L2 videos with L2 subs when examining vocabulary acquisition, a study from 2016 found contradicting evidence when examining oral skills. Ayand and Shafiee studied girls

(n=60) aged 15 to 20 whose first language is Persian. They examined whether L1 subs or L2 subs were better for students' oral fluency and accuracy. Findings indicated that watching L2 videos with L1 captions were better than L2 captions for the students' oral production skills (Ayand and Shafiee 2016). This difference in caption was not found to be great in size, but was found to be true for both the experimental and control group. This indicates that it could be better with a different approach for oral skills than vocabulary acquisition.

Another meta-analysis was conducted in 2018 by Yeldham. In his study, Yeldham studied the results of 9 studies in order to find out whether watching videos helps students with their listening comprehension skills. The results of these studies found that watching videos, especially those with captions, helped increase learners' listening comprehension (Yeldham 2018). Interestingly, lower proficiency learners had more use of the captions. It was found that the lower proficiency learners tended to read the captions more than the higher proficiency learners. Similarly to studies done on vocabulary and videos with captions, it was found that groups that were given captions generally performed better than those who did not (Yeldham 2018). It is further explored by Yeldham that students might learn better by both reading and listening simultaneously, allowing the students to both learn its written form and spoken form.

The findings by Ayand & Shafiee, that L1 captions are better for oral skills than L2 captions, is seemingly further confirmed by a study in 2020 by Masrai. Students(n=78) with Arabic as their first language, aged 19 to 20 were studied and given the task to watch L2 videos with L1 captions out of school. Findings indicated that after a 5 week period, the students had a significant increase in their listening comprehension, as well as their vocabulary acquisition (Masrai 2020). It is further discussed by Masrai that there is an interdependency between vocabulary and listening comprehension, yet that even so, the students' listening comprehension on its own had a significant increase. This is explained by giving examples such as the students being able to pay attention to faster paced speech (Masrai 2020).

Few of the discussed studies involved students' speech when it came to oral skills. This will be further discussed in the discussion section. Even so, it is interesting that much research goes into listening comprehension and not speech proficiency, when speaking and listening are considered to be two important parts of communication (Munden 2016). It could be that measuring listening comprehension is easier than measuring speech proficiency.



Nonetheless, these studies revolved around students' ability to understand what is being said and paying attention, an important part in communication (Munden 2016). Interesting ties were linked to reading skills (Montero Perez, Van Den Noortgate et al. 2013) when watching videos, as well as vocabulary knowledge (Masrai 2020). Further research could be done on whether there is a correlation between reading skills or vocabulary knowledge and oral skills. It would appear that although researchers find different findings upon the effect of various exposure to media and oral skills, certain points they find common ground in, such as listening comprehension being dependent on other skills.

#### **4.2.2 Acquisition through Lyrics in Music**

Before delving into this section on music and oral skills, it should be noted that some of the studies had to do with using music and songs in the classroom. Although this is not directly linked with Extramural English, the findings can have implications on incidental learning through Extramural English activities.

A study conducted by Moradi and Shahrokhi examined whether songs helped Iranian children (n=30) aged 9 to 12 improve their English pronunciation. The children were put into an experimental and a control group. The experimental group listened to the song, and the control group only had it read aloud. The findings showed that the experimental group had a better performance in both pronunciation and intonation, as well as stress pattern recognition (Moradi and Shahrokhi 2014). It is further discussed that the children learned better with more repetitions, as this gave them more opportunities to imitate the pronunciation (Moradi and Shahrokhi 2014). Lastly, Moradi and Shahrokhi suggests further studies consider whether different genres of music can have different outcomes.

A similar study was done in 2017 by Yusmita & Angraini, seventh graders (n=60) from Indonesia were split into an experimental and a control group, where the experimental group were taught using English songs, and the control group were not. The findings were that the experimental group significantly improved their English pronunciation (Yusmita and Angraini 2017). Different songs were used in the study, and it is discussed that this allowed the students to get a greater amount of varied examples, allowing for better learning. Yusmita

and Angraini highlight the importance of the students getting more opportunities to speak, as well as training their pronunciation ability unconsciously (Yusmita and Angraini 2017).

In 2021, Saldiraner and Cinkara undertook another similar study in Turkey. 72 children aged 10 to 12 were split into a song group, and a reading group. Six songs were used in the study. Both pretests and posttests were used. The findings indicated that the group using songs had significantly greater improvement in pronunciation than the group that were reading (Saldiraner and Cinkara 2021). They further highlight that using music and songs motivates learners, and that the learning environment it helps create is more relaxing and stress-free (Saldiraner and Cinkara 2021). Additionally, similarly to Moradi and Shahrokhi, they suggest that different types of songs might yield different results.

Lastly, another study from 2021 sought to understand whether Saudi students (n=38) aged 18 to 19 found using English songs to be an effective tool in learning English on their own. A questionnaire was given to the participants, mainly focusing on their own perception of whether English songs helped them learn the English language. The findings showed that the students believed that they learn new words from listening to English songs, that it motivates them, and that they actively use words they learn from songs in communications with others (Jabak 2021). Also, the students revealed that they generally like to listen to English music in their free time (Jabak 2021). Knowing that listening to music is popular amongst similar age (SSB 2022) groups in other countries (Kuppens 2010), this positive viewpoint might be applicable to similar demographics.

Compared to research into grammar and vocabulary and songs, oral skills have not received as much attention in research (Saldiraner and Cinkara 2021). This is somewhat apparent in the repeating nature of the methodology in these studies. However, that is not to say that the research done is any less important, as examining the same phenomena multiple times can help prove the findings (Thurén 2021). The general findings in these studies is that music can help students' pronunciation in a school setting (Moradi and Shahrokhi 2014). It is also believed that students' engagement in music in their spare time can lead to furthering their oral skills (Jabak 2021). By combining these two findings, one can hypothesize that students who encounter music in their spare time, can have at least a fraction of the learning that they would have in school.

Second Language Acquisition and motivation was covered in chapter 2 of this thesis, and discussed how repetition (Flognfeldt and Lund 2016) and motivation (Harmer 2015) are important factors for language learning. Combining this with the presented studies, we can observe how listening to lyrical music might develop students' oral skills. However, most of

the studies presented, although positive to the correlation between music and oral skills, were conducted in a school setting. Therefore, further research could be done on whether this translates to the students' spare time activities as well. As we have seen, students believe there to be a positive correlation between them listening to music and their oral skills (Jabak 2021). However, further research confirming this beyond students' belief could give this notion a more stable foothold.

### **4.2.3 Acquisition through Video Games**

The previously discussed study by Kuppens finds its relevance yet again. Seeing how the tests the Flemish students (n=374) took were oral, some of the findings can be applied here as well. It was found that playing computer games had a positive influence on both translation tests they took (Kuppens 2010). Kuppens highlights that the types of games played were not accounted for. The possibility of different types of games giving different results are discussed.

In a study from 2012, Sylvén and Sundqvist examined whether playing video games had any effect on Swedish learners (n=86) aged 11 to 12 English vocabulary and listening comprehension skills. The results found a positive relation between gaming and listening comprehension skills, and that time spent on playing games seemed to have a positive correlation with L2 proficiency (Sylvén and Sundqvist 2012). However, they highlight that other variables such as prior proficiency, cognitive level or preferred learning style were not accounted for, and therefore other explanations are plausible (Sylvén and Sundqvist 2012). Interestingly, Sylvén and Sundqvist also discuss the possibility of different types of games possibly yielding different results, such as various multiplayer or massively multiplayer online role-playing games. This variable is however not one they sought to examine in this study.

The variable of types of games was added in a later study by Sundqvist and Sylvén in 2014. Swedish fourth grades (n=76) aged 10 to 11 were studied. Whether there were differences between genders was also examined. The students were categorized into three groups based upon time played per week. Nongamers, who played no games. Moderate gamers who played less than 4 hours per week, and frequent gamers, who played more than 4 hours per week. Findings showed that the nongamer group had significantly more girls, with 27 girls and 4 boys (Sundqvist and Sylvén 2014). The moderate group had 16 girls and 11 boys, and the frequent group had 7 boys and 1 girl (Sundqvist and Sylvén 2014). Self-assessed English ability of the students was overall greater the more the students played video games. Additionally, the students' fear of speaking incorrectly were lower if they played more video games (Sundqvist and Sylvén 2014). Frequent gamers were also much less afraid of making oral mistakes than the other groups overall. The boys who played video games often preferred multiplayer games, whereas the girls who played preferred single player simulation games. Not much more is concluded by these findings in different types of games played, but there being a difference can be interesting in itself.

A study on 11 year old Flemish children (n=30) that had no previous formal English education was conducted in 2017 by De Wilde and Eyckmans. The children were tested in both vocabulary and proficiency, thereunder listening, speaking, reading and writing skills. The findings were mixed, with speaking skills having a mean of 49% on the test given, and listening skills having a mean of 64% (De Wilde and Eyckmans 2017). However, there were great individual differences. On the listening comprehension test, 13 of 30 children had a score of 80% or higher, and 12 children had a score below 50% (De Wilde and Eyckmans 2017). Additionally, a significant correlation was found between the children's test scores and video games (De Wilde and Eyckmans 2017). Interestingly, as opposed to the other studies discussed earlier, this one was conducted on children with no formal education, indicating that video games can lead to incidental learning on its own.

A somewhat contradicting study by Nimani and Dagarin in 2019 found that there was no correlation between playing video games and listening comprehension skills (Nimani and Dagarin 2019). They studied 9th graders (n=123) in Kosovo. The students took both listening tests and vocabulary tests, as well as a questionnaire regarding their out-of-school habits on English-related activities. Neither vocabulary nor listening was found to be affected by video games exposure, but audio-visual forms without subtitles had positive influence on both skills (Nimani and Dagarin 2019). The fact that video games were found to have no influence on

both listening comprehension and vocabulary collides with the findings of most of the other studies presented.

In 2020, De Wilde, Brysbaert and Eyckmans sought to examine what proficiency level Dutch-speaking children (n=780) aged 10 to 12 had learned prior to formal education. The children were tested in vocabulary, listening, speaking, reading and writing skills. A questionnaire was also used in order to find out what the children had been previously exposed to. The findings indicate that 10 to 25% of the children could communicate at an A2-level (De Wilde, Brysbaert et al. 2020). Comparatively, about 25% of the children had not picked up much English yet (De Wilde, Brysbaert et al. 2020), implying great individual differences. According to De Wilde, Brysbaert and Eyckmans, a variable possibly explaining this is the amount of exposure (De Wilde, Brysbaert et al. 2020). Interestingly, it was found that reading L2 books and watching television with subtitles were not the most important activities for learning. The most important activities were use of social media in English, gaming in English, and speaking in English (De Wilde, Brysbaert et al. 2020). Similarly to the study by De Wilde and Eyckmans from 2017, it is worth noting that although there were great individual differences, many of the children were already somewhat proficient in communicating (De Wilde, Brysbaert et al. 2020).

It would generally seem that video games lead to greater oral skills. The findings of most studies indicate that either listening comprehension, oral pronunciation or speaking anxiety is affected positively by video games. However, not all research found a correlation between video games and oral skills (Nimani and Dagarin 2019). This could be due to many factors: geographical differences, cultural differences, age difference, or even individual differences between participants across the different studies. Video games do however have the potential to give students much English input and even output through exposure, seemingly complying with the need for general second language acquisition of repeated exposure over time (Flognfeldt and Lund 2016).

## 5 Discussion

In this chapter, I will discuss the findings of the various studies. The findings will be mainly discussed separately within each form of media. Comparisons between the forms of media will be made when appropriate.

### 5.1 Videos

In this section, the effect on videos on vocabulary and oral skills will be discussed. First, on their own, and then the two skills will be compared, in order to examine whether there are any perceived differences or similarities in how the two skills are acquired through videos.

#### 5.1.1 Videos and vocabulary

The overall findings of whether watching videos led to vocabulary acquisition were that watching videos in English with English captions led to greater vocabulary acquisition than captions in the learners' L1 or no captions at all (Teng 2019). However, many minor findings were vastly different. Such as whether existing proficiency had any effect on vocabulary acquisition (Montero Perez, Van Den Noortgate et al. 2013), and what the effect of L1 captions is on vocabulary (Vulchanova, Aurstad et al. 2015). We will start by discussing watching videos in general, and then move onwards to the factors of existing proficiency level and L1 captions.

As mentioned, the studies agree that watching L2 videos with L2 captions leads to greater vocabulary acquisition (Teng 2022). However, most of these studies were conducted in the classroom, where the teacher ensured that the videos had L2 captions. In an Extramural context, the availability of L2 captions will vary. Video on demand services will often give the option to have Closed Captions of English series, but other video services such as Youtube or Twitch will rarely have captions, and more often have automated captions or no captions at all. Therefore the teacher should encourage students to, when possible, switch the

captions setting to English where available. Although these studies more often were done in a classroom setting, it can easily be applied to an Extramural setting as well. As Webb discovered, movies have the potential in them to be a platform for incidental vocabulary acquisition (Webb 2010), with the potential being greater if more movies are watched. Although series were not included in this research, one might hypothesize that the same could occur when watching series.

What happens when students choose to watch videos with L1 captions? Most studies find that there still is vocabulary acquisition involved, but at a smaller level (Teng 2019). However, in the study from 2015 on Norwegian teenagers, it was found that L1 captions had a negative effect on comprehension (Vulchanova, Aurstad et al. 2015). This implies that the crossing of L2 audio and L1 captions can be a hindrance to vocabulary acquisition. Seeing as English shows and movies on TV most often have captions in the L1 language, it can be hypothesized that exposure to English from TV is less effective than exposure to English from streaming, where the captions can be chosen. It could also be that this correlation between L2 audio and L1 captions only occurred in this study due to differences in the participants, but it could also be due to linguistic reasons of differences in the L2 and L1.

Findings disagree on whether proficiency level prior to testing had any effect. Some studies found that proficiency level did not have any impact on learning through videos (Montero Perez, Van Den Noortgate et al. 2013) with captions (Teng 2022). Another study found that proficiency did affect the learning achieved (Vulchanova, Aurstad et al. 2015). Some variables that could affect this difference in findings could be age or country. However given that the ages are quite similar in two of the contradicting studies, the possibility of this being a variable falls. Another potential variable then is country. One of the studies which found proficiency to not be a variable had Chinese participants (Teng 2022) while the study that found proficiency to be variable had Norwegian participants (Vulchanova, Aurstad et al. 2015). These two countries are quite different in culture, given that one is Asian and the other is Northern European. This leads to a most likely cultural difference, which could be a possible explanation to this difference in findings.

### 5.1.2 Videos and oral skills

Most of the studies on videos and oral skills examine listening comprehension. Listening is an integral part of communication, and therefore oral skills (Harmer 2015). Overall findings indicate that watching L2 videos with L2 captions had a great effect on listening comprehension (Yeldham 2018). Interestingly, in the study on how watching videos with captions affected oral production, it was found that L1 captions had greater effect (Ayand and Shafiee 2016). Additionally, most of the studies (Masrai 2020) highlight the interdependence between vocabulary knowledge, reading skill and listening comprehension (Monteri, Den Noortgate & Desmet 2013).

The study conducted by Ayand and Shafiee found that L1 captions were slightly more effective than L2 captions on students' oral production (Ayand and Shafiee 2016). It should be mentioned that only one study was found to confirm this amongst the studies examined, and that study looked at listening comprehension (Masrai 2020). Nonetheless, its implications are important to examine. This could imply that there is a difference in approach for captions when students learn oral skills, as opposed to vocabulary skills. It could be that L2 captions are better for vocabulary, and L1 captions are better for oral skills. Further research comparing L2 and L1 captions with oral skills could clarify this. However, variables such as age and country could affect the results as well.

A correlation between reading skill and vocabulary, and listening comprehension is often highlighted as an important factor (Montero Perez, Van Den Noortgate et al. 2013). Additionally, it would appear that lower proficient students are more reliant on captions for their listening comprehension (Yeldham 2018). We know that in language learning, grammar and vocabulary must come first (Thornbury 2015). As such, captions could serve as a form of scaffolding for students, helping them understand both the written form and spoken form of words they encounter in visual media. Certain accents could for example be more difficult to understand (Harmer 2015), and captions could help weaker students understand what is being said. Regarding this relationship between reading skills and vocabulary, and listening comprehension, one begins to wonder where the line goes between the respective skills.



### **5.1.3 Comparison of vocabulary and oral skills acquisition through videos**

A conclusion one could make based on the findings on videos and vocabulary acquisition and oral skills, is that videos help with both of these. Additionally, the presence of captions in L1 usually brings greater learning, and L2 captions can bring greater than L1. Interestingly, prior proficiency is also often brought up in both vocabulary acquisition and oral skills studies as an important factor, although not all studies conclude with its importance.

Videos in themselves appear to bring learning of both vocabulary acquisition and oral skills. L1 and L2 captions add a form of scaffolding, with each form of captioning elevating the learning potential. However, there is some uncertainty as to whether L1 or L2 captions bring greater oral skill learning, as seen in both Ayand and Shafiee (Ayand and Shafiee 2016) and Masrai's study (Masrai 2020). The differences in gains between L1 and L2 captions are however described as small in Ayand and Shafiee's study, and therefore, seeing as there is an overall agreement that L2 captions bring both learning in vocabulary and listening comprehension, an argument could be made for L2 captions being the safer option. With that being said, further research into whether L1 or L2 captions bring greater learning would hopefully clarify this uncertainty.

Prior proficiency is a somewhat unclear field within vocabulary acquisition and oral skills through videos. In language learning, it is encouraged that students engage with English somewhat over their proficiency level (Krashen 1982). Videos can be a way of doing this, as different forms of video media can bring a more natural approach to the language (Harmer 2015). With that said, some studies found that prior proficiency was a factor for learning vocabulary (Vulchanova, Aurstad et al. 2015), and some found it to not be an important factor (Montero Perez, Van Den Noortgate et al. 2013) (Teng 2022). The same goes for oral skills, where no correlation was found (Montero Perez, Van Den Noortgate et al. 2013), and some correlation was found (Yeldham 2018). Do note that one of the sources on both skills is the same one, which could mean that its viewpoint and findings are either strengthened or weakened if either side of the overall findings are confirmed. Based on these studies, we cannot say for certain whether prior proficiency in English is an important factor when watching videos. Although what we do know, is that it was usually the weaker students that had a greater effect from using captions, indicating that perhaps in the studies where no correlation was found, the students had an overall greater proficiency than in the studies

where a correlation was found. Do note that this is an hypothesis, but perhaps one that should be further researched.

An interesting point of discussion is the amount of studies and types of studies done amongst vocabulary acquisition and oral skills. Seemingly, vocabulary acquisition has a greater amount of studies than oral skills, and within oral skills, there appears to be little done on the oral production of students. Firstly, the difference in studies on vocabulary and oral skills could be due to the amount of work required to acquire sufficient data. It should be easier to give pretests and posttests on vocabulary, seeing as this is something they do individually. Secondly, the time required differs significantly. As for oral tests, more time would be required, and much fewer students could be researched in the same time you could examine students' vocabulary. Additionally, vocabulary tests are easier to interpret and correct than students' oral production. Oral tests tend to be a more stressful situation for the students (Harmer 2015), possibly giving less accurate results. To summarize, the effort required can be greater and more difficult when examining oral skills rather than vocabulary, as well as a higher number of participants being more difficult to examine, possibly making oral skills a daunting field to study.

## **5.2 Lyrics in Music**

Lyrics in music have been found to help develop students' vocabulary and oral skills. In the following part of the chapter, the findings of the two skills will be discussed as well as compared to each other.

### **5.2.1 Music and vocabulary**

There were broad differences in age of participants between the studies examined in the music and vocabulary section. Even so, all of the studies found music to help with the students' vocabulary acquisition (Pavia, Webb et al. 2019). With that said, and as briefly mentioned

earlier, these studies were conducted on whether music in the classroom helped vocabulary acquisition. A teacher was present and helped the students with tasks, which facilitated learning. Extramural English requires a teacher to not be present or mediating the exposure to music in any way (Sundqvist 2009). Much of this section will therefore not only discuss the findings in detail, but also to what extent they can be applied to an Extramural context.

The findings were overall positive for multiple age groups regarding vocabulary acquisition through music (Murphy Odo 2021). The findings usually highlight the repetitive nature of most songs (Murphy Odo 2021) as one of their strengths for vocabulary acquisition. Similarities are drawn towards reading and its repetitive nature (Pavia, Webb et al. 2019), and suggestions are made that higher exposure rates can lead to greater acquisition (Coyle and Gómez Gracia 2014). The implications of these findings can be that regardless of age, students being exposed to music in greater quantity might achieve greater vocabulary acquisition. Interestingly, Murphy Odo D found that the effect of using music increased as the students grew older. Perhaps as proficiency in the language increases, the overall effect of listening to music increases as well.

Applying these findings to an Extramural context can be highly speculative in nature. However, knowing theories on second language acquisition, we can at least hypothesize certain possibilities and implications. The studies found that a major part of the learning from music was due to their repetitive nature. Additionally, both studies (Kuppens 2010) and statistics (SSB 2022) show that students listen to a lot of music in their spare time. As such, one can be inclined to believe that at least some of the findings can be applied to incidental learning through out-of-school listening to music as well. With that said, an important part of these studies is the fact that tasks revolving around music were done in the classroom, something which students probably will not do in their own spare time. Nonetheless, we can hypothesize that some portion of the findings can be applied to an Extramural context, seeing as repetition over time is an important part of vocabulary acquisition (Flognfeldt and Lund 2016). How well this translates, and to what extent, however, we cannot say for certain. More research into this, specifically, would have to be done.

## 5.2.2 Music and oral skills

Findings indicate that in both a school (Moradi and Shahrokhi 2014) and out-of-school setting, music can help improve oral skills (Jabak 2021). This is likely due to the repetitive nature of music giving more opportunities to imitate pronunciation (Moradi and Shahrokhi 2014), as well as the amount of music existing giving a varied amount of examples (Yusmita and Angraini 2017). Additionally, different genres could lead to different learning (Moradi and Shahrokhi 2014). Motivation is also found to be an important factor (Jabak 2021), as some students were interested enough in the music they listened to, as to actively use words they encountered in music later on. Motivation, the potential of genre, and lack of research in the field will be discussed further in this section.

Motivation is a known important key to learning (Harmer 2015). The implications for Extramural learning if students are willing to find out about foreign words on their own and later use them in communication (Jabak 2021), is quite positive. Listening to music is one of the most popular activities amongst students (SSB 2022), and there is potential for incidental, and even intentional learning from music (Jabak 2021). As for whether most of these studies discussed can be relevant for an Extramural context, we must look to the field of Second Language Acquisition. Repetition over time is important for acquisition (Flognfeldt and Lund 2016), and although having a teacher mediate makes it easier to learn (Harmer 2015), students are capable of achieving learning on their own (Vygotsky 1978). Combining this knowledge with the findings of the studies, such as students being able to learn oral skills from music unconsciously (Yusmita and Angraini 2017), we can hypothesize that maybe some of the findings are applicable to out-of-school and Extramural English as well.

Whether certain genres give more or less potential for learning is an interesting point for discussion. Perhaps genres where the songs are more repetitive are better for learning, as the students are exposed to the same words multiple times. It might be that the opposite is true, and that genres with more varied vocabulary give more opportunities to learn more foreign words. It could also be that proficiency level can be tied to whether repetitiveness or not is an important factor. Also, mixing up genres of music could potentially have an effect on learning. The main problem being, that there is not much research done on the field of music and oral skills (Saldiraner and Cinkara 2021), and even less so in the field of out-of-school

exposure to music and oral skills, leaving us with many questions and hypotheses, and little research to base it on.

### **5.2.3 Comparison of vocabulary and oral skills acquisition through music**

Overall, there seems to be agreement in research that music can bring both vocabulary acquisition and oral skills both in school and out-of-school. Similarly to videos and acquisition of vocabulary and oral skills, more research seems to be done on vocabulary than oral skills. However, dissimilar to the field of videos, in the field of music research, there seems to be a greater focus on oral production skills rather than listening comprehension skills. In research on both vocabulary and oral skills, there seems to be a consensus that exposure to music leads to greater learning regardless of age, and that more exposure increases this learning. Interestingly, only the studies on vocabulary skills look into the relation between prior proficiency and learning (Murphy Odo 2021), whereas the studies on oral skills do not.

Prior proficiency and age as variables are often discussed when looking at vocabulary, but not in oral skills. It is often found that for vocabulary acquisition, higher prior proficiency and age helps achieve greater learning (Vulchanova, Aurstad et al. 2015). Interestingly, these two variables are not examined in the studies on oral skills. Further research addressing these variables could lead to different results. As discussed in 5.1.3, there were mixed results with the variables of age and proficiency when examining a correlation between videos and vocabulary and oral skills. Therefore we can hypothesize that there could be a difference between vocabulary and oral skills when learned through lyrical music. However, we cannot say for certain.

## 5.3 Video Games

The studies examined indicate that video games have a positive impact on both vocabulary and oral skills. This section will further examine and discuss video games and their impact on vocabulary and oral skill. The impact video games have on the two skills will also be compared and discussed.

### 5.3.1 Video games and vocabulary

Overall, studies conducted on the relation between vocabulary acquisition and video games find a positive correlation between the two (Wu, Zhang et al. 2020). Two main methods were used in the studies in order to determine the effect of games: a) vocabulary tests accompanied by questionnaires on what their Extramural habits were (Sylvén and Sundqvist 2012), and b) vocabulary tests before and after the students played a specific game (Janebi Enayat and Haghighatpasand 2019). Both methods lead to the same results. Types of games were often discussed as a potential variable for learning (Sundqvist 2019), and whether a game has the possibility for both input and output (Calvo-Ferrer and Belda-Medina 2021). Motivation was also a key factor, with even students whom did not enjoy playing video games believing that games could lead to greater vocabulary learning (Chen, Hsu et al. 2021).

Firstly, we will discuss the fact that the findings are in agreement across both different age groups and countries. From Swedish students in their early teens (Sundqvist 2019) to Taiwanese students in their late teens (Chen, Hsu et al. 2021), as well as a meta-study across multiple countries (Wu, Zhang et al. 2020) all finding that video games lead to greater vocabulary acquisition. This indicates that regardless of age and country, video games can lead to the development of vocabulary. Interestingly, only studies involving Sundqvist amongst those discussed have sought to look at differences between boys and girls, and found that not only do boys play more, they seem to profit more from video games as well (Sylvén and Sundqvist 2012). Whether this holds true for playing video games across all ages and countries is still up for debate, as none of the other studies discuss this. Both outcomes of whether it holds true in other studies could have implications on vocabulary and video games.

Secondly, differences in genre or type of game are often discussed, but rarely examined in detail. As previously mentioned, Sylvén and Sundqvist theorized that the difference found between boys and girls could be due to their preferred type of game (Sylvén and Sundqvist 2012). Sundqvist and Wikström further examined this and found the same occurrence, with boys preferring multiplayer games and girls preferring single player games (Sundqvist and Wikström 2015). These studies both examined the students' out-of-school exposure to video games. In a study where all students were asked to play a multiplayer game, *Among Us*, the findings were that the participants had an increase in vocabulary regardless of gender (Calvo-Ferrer and Belda-Medina 2021). The implications of this is that perhaps if girls played similar games as boys, they would achieve the same amount of vocabulary acquisition. Multiplayer games give opportunities for both input and output, both which are important components for language learning (Krashen 1982), whereas single player games usually only give opportunities for input. This could be an underlying reason as to why there seemingly is a difference between boys and girls, seeing as they prefer different types of games.

Lastly, "richness" of games is discussed in the meta-analysis by Wu, Zhang and Wang. They found that if a game is too little or too engaging, then this can interfere with vocabulary learning (Wu, Zhang et al. 2020). The participants of Janebi Enayat and Haghightpasand's study also highlight this in their post-game interviews as an important factor for their enjoyment for the game they played (Janebi Enayat and Haghightpasand 2019). Difficulty of the game, as well as engagement could be a variable for learning. Students should encounter a form of English which is slightly more difficult than their own (Krashen 1982) if they are to have optimal learning, and therefore the games the students play should perhaps be of suitable difficulty. There are official labels on games telling what age demographic they are meant for, called ESRB ratings, but these ratings deal with maturity of content, not of the potential of learning of the content (ESRB 2022). Whether the suggested age on games correlates with the potential for learning is a whole other topic.

### **5.3.2 Video games and oral skills**

Similarly to the research on videos and oral skills, most of the research found had to do with listening comprehension. Even so, a greater amount of studies was found on speaking and video games than speaking and videos. Both students' self-perceived skills were studied

(Sundqvist and Sylvén 2014), as well as students' speaking skills were tested (De Wilde, Brysbaert et al. 2020). Overall, the findings indicate a positive relation between video games and oral skills. However, one study found no correlation between video game exposure and listening comprehension (Nimani and Dagarin 2019). Age and proficiency of the students in the studies discussed also vary, with some students having no formal instruction in English (De Wilde and Eyckmans 2017), while the other studies were on children with formal instruction. Usually within all studies, comparisons were made to other media, such as social media or watching videos (Nimani and Dagarin 2019).

Firstly we will discuss the implications of children with no formal education having up to A2 level proficiency (De Wilde, Brysbaert et al. 2020) as well as scoring up to 80% on listening comprehension tests (De Wilde and Eyckmans 2017). It should be noted that these high scores are from the most proficient of the children, and that there were many in the opposite end of the spectrum. However, in both of these studies, a correlation was found between the children's' high scores in proficiency and their exposure to video games. Children who had been exposed to more games than others had a higher chance for higher proficiency (De Wilde, Brysbaert et al. 2020), implying that even without formal education, children can learn incidentally from playing video games. Other variables, such as their parents filling the role of the teacher and helping their children with foreign words are not discussed in either studies. To further find out whether this is entirely on their own, or if they had help in any capacity would be an interesting further study. Nonetheless, it would appear that even for the least proficient of students, playing video games can help with oral skills, both listening and speaking (De Wilde, Brysbaert et al. 2020).

Secondly, we will discuss possibilities as to why there appears to be less focus on oral speaking and pronunciation and video games. This could, similarly to what was discussed during section 5.1.2, be due to the higher complexity of assessing oral skill rather than vocabulary or listening comprehension. More time would be required to test for example 10 students orally, rather than giving them a written listening comprehension test. Additionally, with tests on paper, one can review the answers multiple times. If one is to go back and review answers that were given orally, one might have to either film or take extensive notes, which could make an already stressful situation worse for the participant (Harmer 2015). We can see listening comprehension tests giving results on a percentage scale (De Wilde and Eyckmans 2017), while oral skills can be harder to grade on a bigger scale. The Common European Framework of Reference for Languages (CEFR) has six levels of overall



proficiency which is usually used, from A1 to C2 (CEFR 2001). Optionally, local curricula aims could be used, such as the Norwegian LK20. Again, these examples give less precise results than a written test possibly can.

### **5.3.3 Comparison of vocabulary and oral skills acquisition through video games**

Overall, the findings of the studies on video games find that video games usually lead to greater learning of both vocabulary and oral skills. Only one of the studies examined did not find a correlation between video games and English language learning, for neither vocabulary nor oral skills (Nimani and Dagarin 2019). The studies examined had a combination of both in-school and out-of-school approaches to testing the effect of video games. Different ages are examined across the various studies, as well as countries of origin. Interestingly, for vocabulary, types and genres of games are more often highlighted as a point of interest and potential variable for learning (Sundqvist and Wikström 2015) than for the studies on oral skills.

The methodology of the studies are quite similar both when vocabulary and oral skills were being tested. There were two "types" of methods found in the studies. The first had a questionnaire asking the participants about their extramural activities, followed by a test, either on vocabulary or oral skills. The second method, which only was found in the vocabulary section, tested the students' vocabulary before and after a specific game was played (Janebi Enayat and Haghightpasand 2019). One form of methodology being found in both studies on vocabulary and oral skills, but not the other is interesting, as it implies that the first form can acquire data on both skills, while the latter might not. Theories on second language learning agree that repetition over time is needed for students to learn (Munden 2016). However, the findings of both Janebi Enayat & Haghightpasands' study (Janebi Enayat and Haghightpasand 2019) and the study of Chen, Hsu, Chen and Todd (Chen, Hsu et al. 2021) found that after a single playthrough of a game, students had learned several target words. Given that a correlation has been found between oral skills and playing video games (De Wilde, Brysbaert et al. 2020), it would be interesting to see if a singular playthrough would help students' oral skills, similar to the findings on vocabulary.

Nonetheless, it seems that a single playthrough of a video game can develop students' vocabulary, while we cannot say the same for oral skills, as there is a lack of research.

In studies on both vocabulary and oral skills, types or genres of games are often discussed by the researchers as possible variables, with findings indicating a difference between single player games and multiplayer games (Sundqvist and Sylvén 2014). The differences found are that gender, proficiency, type of game played and amount of time played often share a correlation (Sundqvist and Wikström 2015). Boys often play more in general, they play more multiplayer games, and there is often found a correlation between increased time played and higher proficiency (Sylvén and Sundqvist 2012). However, when tests are done where all participants are asked to play a game, results on learning even out. This can be seen for both single player games (Chen, Hsu et al. 2021), and multiplayer games (Calvo-Ferrer and Belda-Medina 2021), where in both cases, most students showed significant vocabulary learning in the posttests after playing the respective games. This implies that if girls played similar games as boys, and as much as the boys, they could achieve the same amount of vocabulary learning. Unfortunately, no studies were found to confirm whether this could be the case for oral skills as well, leaving us only with hypotheses that this could be applied to oral skills as well.

## 6 Conclusion

For both vocabulary and oral skills, activities that students find enjoyable outside of school are generally found to be positive for their English as a second language learning. Watching videos has been found to have a positive effect on both vocabulary and oral skills, with the positive correlation increasing depending on captions (Teng 2022). Listening to music has also been found to increase both vocabulary (Pavia, Webb et al. 2019) and oral skills (Moradi and Shahrokhi 2014) in students. Video games are also found to increase both vocabulary (Wu, Zhang et al. 2020) and oral skills (De Wilde, Brysbaert et al. 2020).

Although not all of the studies covered in this thesis have been directly tied to the students' extramural activities, but rather the effect of videos, music or games in class, we can by comparing the findings of the two types of studies, at the very least, hypothesize that some of the in-school findings can be translated into an out-of-school context. Additionally,

repetition has repeatedly been confirmed to be a key factor in learning English as a Second Language (Flognfeldt and Lund 2016).

Discussions regarding findings are similar across studies, even when the media in question are different. Namely whether genre and captions are important variables. Genre is discussed in both music as a media, and video games. In music, it is discussed whether the different lyrics in different genres promote varied practice for oral pronunciation (Saldiraner and Cinkara 2021). In video games, genres are discussed to explain differences in both gender and correlation between proficiency and types of games (Sylvén and Sundqvist 2012). It is often how genres affect students' output in relation to the relevant media that is discussed. Interestingly, genres are rarely discussed when videos are the topic, as well as in relation to students' input, compared to their output. In the studies on videos, the focus usually is solely on how much vocabulary is learned, and how captions affect this learning. However, although the different studies on videos do not discuss different genres, they themselves conduct research on different genres of videos. Shorter videos were watched, movies were analysed, TV-series were watched, as well as documentaries. All concluded that videos had a positive impact on both vocabulary and oral skills, especially when paired with English captions. Whether there is a difference between these types of videos however, we do not know, and this would be an interesting variable to add to the video as a media for learning discourse.

To conclude, it appears that both videos, music and video games have the potential to promote students' English language learning in both in-school and out-of-school settings. Similar studies done in-school and out-of-school leads us to hypothesize that some of the learning from one can be applied to the other. Both variables of age and country of students seem to be irrelevant when they are faced with enough Extramural English, as repetition and amount of exposure are key factors for learning. The fact that students have been found to learn English seemingly on their own through exposure to English media (De Wilde, Brysbaert et al. 2020), have potentially great pedagogical implications.

## **6.1 Pedagogical Implications of Extramural English**

Firstly, implications for teachers will be examined. The findings of this study indicate that students learn both vocabulary and oral skills from Extramural English activities such as

watching videos, listening to music and playing video games. Even students with no prior education show learning through exposure to English in their spare time (De Wilde, Brysbaert et al. 2020). In order to better accommodate their students' needs in the English classroom, teachers could map their students' Extramural activities and interests. Knowing what the students spend their time on, as well as what skills are usually learned from these activities, can help the teacher plan more relevant lessons. Additionally, by knowing what interests the students, the teacher can try to make lessons more relevant to their interests.

Secondly, implications for teacher educators will be discussed. There are clear signs that students learn from the Extramural English activities they do on their own. This changes the role of the English teachers. Whereas a teacher traditionally taught the language, they can see a shift in their role (Harmer 2015). Educating teachers should reflect this change as well. Further focus on how teachers can help students navigate different media, as well as understand different contexts in which they meet the language could help the students get a greater understanding of the language. Not all students have been found to produce English orally in their spare time (Sundqvist and Sylvén 2014), so teaching teachers how to better focus on oral production should receive more attention.

Thirdly, implications for policy makers will be discussed. In the "Core Elements" section of the LK20 on the English subject, both communication, language learning and meeting with English texts are highlighted as important elements which students should learn to engage with (Kunnskapsdepartementet 2019). It would appear that the Norwegian policy makers behind the LK20 have thought of the students' Extramural activities. A big focus of the LK20 is to prepare the students for English they meet both offline and online. Therefore there is no further suggestion for policy makers in Norway other than to keep the English subject relevant to the students' real life experiences, as it is currently.

Lastly, implications for parents will be examined. In Norway, we see a gradual increase amongst teens in time spent on Extramural English activities (SSB 2022). The most popular of these activities, namely watching videos, listening to music and playing video games, all have a positive correlation to the increase of English vocabulary and oral skills (De Wilde, Brysbaert et al. 2020). These activities can even be social themselves, such as video games. This is not to suggest that children and teens should not be encouraged to go outside with their friends. Rather, it is suggested that parents do not worry about their children's Extramural English activities as long as it is not at the expense of other activities. As for parents of younger children, a more involved approach is suggested. Helping the children with

new English foreign words could help their English skills. Although they learn on their own (De Wilde, Brysbaert et al. 2020), help from their parents could lead to even more learning.

## **6.2 Limitations of current study**

This thesis has certain limitations, which in turn gave further limitations. However, some of these limitations could incidentally have become some of this thesis' strengths as well. The greatest limitation was the factor of time. Only one semester was allocated to the writing of this thesis, bringing with it more limitations. The amount of research which could be gathered and examined was greatly impacted by this limited time. Due to this limited time, one would think that the thesis would focus on only one form of media. However, in a somewhat optimistic decision, I concluded that three forms of media would be far more interesting. This led to less time to research each form of media.

What this limitation however accomplished, was that although the amount of studies examined for each form of media was overall smaller, the fact that certain variables constantly were found not to have been included, suggests that this might hold true for the greater field of research as well. Although the smaller sample size of studies examined do not represent the entire field of study, the implications should still be valid. An example of a variable which often was discussed but not focused on in research, was the possibility of different genres of games bringing different degrees of learning. Additionally, the question of whether gender differences would stay the same if girls played similar games and equal amount of time as the boys was seemingly never answered either.

## 6.3 Suggestions for Further Research

Many suggestions will be brought forward for further research within the fields of videos, music and video games and their effect on Extramural English learning. The suggestions will be presented in a similar order as the discussions.

### 6.3.1 Videos:

Firstly, in the field of videos, it is suggested that more research is done in the field of watching videos and its effect on oral production skills. Both vocabulary and listening comprehension seem to be researched quite a lot, with findings on both suggesting a positive correlation. Further research on watching videos with various degrees of captions and its effect on oral production skills could examine whether watching videos have an overall positive effect on English language acquisition.

Secondly, it is also suggested to further research the effect of L1 captions when watching L2 videos. It was found that L2 captions brought the best learning (Montero Perez, Van Den Noortgate et al. 2013) with L1 being second best and no captions being worst, while other studies found L1 to have a negative impact (Vulchanova, Aurstad et al. 2015). Clarifying what variables could be affecting the results could clarify which captions work best for L2 acquisition.

Thirdly, video genres are a possible venue for further research. Many forms of streaming and video-on-demand services exist, each offering various forms of movies, series, livestreams and other creator-content. The possibility of video game genre and music genres affecting learning is implied, and examining whether the same goes for watching videos could yield interesting results.

Lastly, whether prior proficiency as a variable affects learning through watching videos should be further studied. It has both been found that prior proficiency is not a factor (Teng 2022), while other studies find prior proficiency to be an important factor (Vulchanova, Aurstad et al. 2015).

### **6.3.2 Music:**

Firstly, in the field of music, it is suggested to further research the general fields of music and vocabulary and oral skills. The field of music being an arena for learning English has received little attention in research (Saldiraner and Cinkara 2021).

Secondly, whether different genres of music bring different degrees of learning is suggested for further research. Genres such as pop are often repetitive in that the chorus often is repeated, while other genres might not have such repetitiveness.

### **6.3.3 Video Games**

Firstly, further research on gender differences between boys and girls is suggested, and to identify whether gaming can lead to equal learning for both. Studies indicate that boys seem to profit more than girls (Sylvén and Sundqvist 2012), and further research could prove or disprove this.

Secondly, genres and types of video games should be further researched. There seems to be a general agreement that multiplayer games and MMO's bring greater English learning than single player games, but to directly compare the two could bring interesting findings.

Lastly, the effect of video games on oral skills is suggested to be further studied. Currently, few studies seem to have been conducted on children who have been in the school system for a while on whether their oral skills are better for playing video games.

## **6.4 Concluding remarks**

Extramural English, incidental learning, out-of-school learning and unintentional learning; many terms can be used for a similar phenomenon (Sundqvist 2009): children's acquisition of the English Language from activities they do in their own free time. There is little denying that children and teenagers have easy access to many forms of English media (Birketveit and Williams 2017), and are much more exposed to English than students were 20 to 30 years

ago. This changes the approach teachers should have to the English classroom, as the students' needs change when they learn certain aspects of the language on their own. As discussed in this thesis, both vocabulary and oral skills are acquired when students watch videos, listen to music or play video games. When their interests have the potential to lead to learning, this in turn can lead to great individual differences. Teachers should be prepared to meet these students with the best understanding of why this might be, and what they might need to become even more proficient in the English language.



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