

Master's thesis

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## English Loanwords in Norwegian

A Loanword Processing Study in Young  
Speakers of Norwegian

Master's thesis in Linguistics

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by

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### **Abstract**

Using loanwords in everyday speech is something most people do on a daily basis. This project examines, which factors come into play when processing loanwords. A test sample of 40 university students was tested on the processing of English loanwords used in Norwegian, using a lexical decision task. The two dependent variables of this project were reaction times, and accuracy. The results of the project showed that the most salient factors in processing English loanwords in Norwegian was the subjective native speaker rating on how Norwegian the loanword was perceived to be, the frequency of its usage, the level of English language competence and the length of the word. The results from this project highlight which factors play a role in the processing of English loanwords in Norwegian.



### **Acknowledgements**

After countless hours of reading, analysing and writing, I can finally, proudly present my project. The work has been both demanding and challenging, but also intriguing and rewarding. I could never have imagined the workload and effort that has to be put down, in order to conduct a project of this size. However, the process of conducting the experiment, and analysing results, gave me new insight on the topic I was researching and has triggered my interest to dig deeper into the field.

I could never have finished this project if it were not for the support from those around me. I would like to give a warm and special thanks to my girlfriend, Maren, who has kept my spirits up in times of despair, given me valuable comments, and supported me throughout the process. Thank you. I must also thank my family and friends who have supported and believed in me, throughout process. Furthermore, I would like to thank all the people who agreed to partake in my experiment, and provided me with valuable information. Last but not least, I would like to give a sincere thanks to Mila Vulchanova who has led me along the way, and provided me with invaluable guidance and support.



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## 1.0 Introduction

I was watching a DVD recently, when I saw something intriguing. A commercial aimed to criminalize the act of illegal downloading, by comparing downloading a pirated movie, to stealing a car. This got me thinking. Is lexical borrowing the same as stealing a car, or downloading copyrighted material? Should users of loanwords, give credit to the donor language as a sort of acknowledgement for their ingenuity of creating words, which are far better suited to label an object in our own language, than our own native words are? Before I can answer such rudimentary questions, it will be useful to have a brief look at the development of language.

A common notion in the present age is that new aspects about the world are being explored. New islands are being discovered, people venture into places where no human has been before, so in one way one might state that the world is getting bigger. On the other hand, new technology allows for individuals to travel around the world, in a matter of days, and never before has the amount of traveling been so widespread as in the present age. One could therefore assume that the world is actually getting smaller. In the last 500 years, new corners of the world were discovered by European explorers, who brought with them diseases, religion and maybe the most important factors in tying the world together; language. In modern days the most important factor in bridging the gap between individuals across the world, are mediums such as TV, radio and of course internet. The usage of social mediums on the internet has brought people from all over the world together and allowed for communication across national borders by the click of a mouse. Due to these transformations in the world, one language tends to stick out from the crowd, and has been coined as being a lingua franca, English. The colonization of Britain and the cultural impact of the U.S has turned English into the most spoken language in the world. No matter where one might travel in the world, English is often the first choice of communication.

English has always fascinated me, and having worked as a teacher in Norwegian schools, I started noticing an interesting trait among many young pupils; namely, the usage of English words in their Norwegian everyday speech. The pupils used many English words in their everyday speech, but when asked to talk English in class, I was often met with reluctance from their side. I hence started thinking whether speakers of Norwegian process English loanwords differently from Norwegian words, or if they treat these loanwords as equivalents to Norwegian native words. Even though languages influence each other across national borders, and the origin of many Norwegian words hail from other languages, I decided to use

the term native Norwegian, for words which are considered to be Norwegian by native Norwegian speakers.

At the onset of this project, I started constructing a working hypothesis on which I could build the experiment. The working hypothesis was concerned with whether:

- *Norwegian speakers process words differently depending on the loanwords' degree of 'foreignness' compared to Norwegian words.*

In addition to this hypothesis, I sought to find evidence for the following:

- *Depending on a speaker's English proficiency, the processing of English loanwords in Norwegian will differ for low proficiency English speakers, as compared to speakers of high English proficiency.*
- *Less Norwegianized orthography will result in longer reaction times.*

The thesis is based on a self-constructed experiment designed to see whether participants process various loanwords differently depending on various predictors. These predictors will be described in full length in section 4.1. The main measurements in the experiment were reaction times and error rates. Section 2.0 will give an outline of various theories concerning the borrowing of words from other languages, how loanwords are being processed, in addition to providing recent studies done on loanwords. In the third section, I will explain the methods I have used in creating my test sample, how I collected the data and which tools that were used. Section 4.0 will provide the full analysis of my data and explains which decisions I made regarding the compositions of the various models I used for the analysis. The fifth section will give a discussion of the results found in my experiment, in addition to cross-referencing the explanations I provide with relevant theory.

## **1.1 Norwegization**

As previously mentioned, the English language is wide spread and can be used in most parts of the world as a lingua franca. The impact of English speaking countries can be credited due to imperialism of the British Empire, because they spread their language and culture to places such as North America, Australia, Asia, and southern parts of Africa to mention a few.

Historically this can be seen as a rather dark chapter for some of the regions that were colonized, due to the nature of colonization and the suppression of indigenous population.

However, from a linguistic point of view, it lead to the expansion of the English language to many corners of the world. American popular culture has also been a major contributor, with

their ideals of the ‘American Dream’ and going ‘from rags to riches’. These ideals were something many strived to reach, and thus enforced the impact English had on people in non-English speaking countries. In addition to this, brands and products from the U.S have become immensely popular, and in turn has brought with it English words and phrases across borders (Norås, 2007).

A common conception is that the age group, which is most receptive to new lexical input, are young people. They infuse technological gadgets into their everyday life, and are bombarded with English words everyday through; music, film, games, TV-shows and social mediums such as YouTube, Facebook, and Twitter. New terminology from these channels are being introduced every day, and young people tend to apply these words to their own vocabulary. Examples of this may be ‘apps’ and ‘like’. Even though these words have Norwegian equivalents, the English words are preferred, because they connote specific domains, the former referring to mobile applications and the latter to liking something on Facebook.

Even though most people embrace new vocabulary in their language, because they find it easier to use them than words from their own language. Some countries have taken actions to preserve their native language, through linguistic purism. An example where this is done successfully is in Iceland. Here they have implemented *phono-semantic matching* (PSM) in which a foreign word is reproduced in the target language, using pre-existing native elements, which are similar to the foreign word in both meaning and sound (Sapir & Zuckermann, 2008). Linguistic purism has to some extent, also been introduced in Norway, but with a rather different outcome. Helge Sandøy, a Norwegian linguist, tried to formulate rules for how foreign words should be *norvagisert* (Norwegianized). He separates between *loanwords* and *forreignwords*, and characterizes the former as words, which have been adapted to a Norwegian orthography. The latter has, a structure that makes the word seem strange Norwegian, as it might be hard to define what gender the word should have (Sandøy, 2000). Some *Norwegianized* words have been hard to accept for the Norwegian native speaker, such as *køntri* for the English *country* (music genre). One reason for why this may have failed in Norway, is due to the manner in which the words are translated. Rather than using PMS as they did in Iceland, many Norwegianized words simply have a changed orthography so that the word looks more Norwegian, but is in fact written quite similar (Aftenposten, 2011).

So what are the reasons why countries such as Norway and Iceland, tend to safeguard their linguistic heritage through measures of linguistic purism? A possible reason for this is the fear that their respective languages may lose ground to English, and thus risking that Norwegian

eventually could fade away as a native language. As Sandøy points out, approximately a 100 different languages tend to die each year, and as the world becomes more intertwined through new means of communication, a need for a common language across borders becomes ever more important (Sandøy, 2000). This can partly explain why governments try to keep their languages as pure as possible in order not to lose their identity. The concept of protecting one's own language is a central topic within the sociology of language, which focuses on language and politics. The central question revolves around how English should be approached compared to national languages in countries where the role of English seems to grow steadily (Janicki, 2004). However, research on the borrowing of words from other languages, has showed that it is more common than one might think. Sandøy states that about 30% of all Norwegian words are in fact loanwords (Sandøy, 2000). Borrowing words is not a modern phenomenon, but can be seen as a normal way in which languages develop. Historically, if one looks to the Norman conquest of the British Isles, the Normans brought with them the French language, which has greatly affected English and partly shaped it into what we hear today.

Using loanwords is a common notion when talking about language. However, is there a link between English proficiency, and the ability to identify and use English loanwords in Norwegian? The next section will present recent research on the topic of language processing, mainly loanword processing, in addition to introduce theories that may be applied to explain the results found in the analysis.

## 2.0 Theories

The following section will introduce several theories that can be applied to the research topic of this project, as a mean to explaining some of the outcomes of the experiment. The focus will lie on the work of Haugen (1950), Field (2002) and Stene (1945). In addition, research on loanword and word processing will be presented. Before we can look more closely at these theories, it will be beneficial to try to define what is to be considered bilingual in this project. Several different claims have been made as to what constitutes being a bilingual, according to early studies of bilingualism; it was regarded as a deficit by scientists, as they regarded monolingualism as being the norm. This view can be explained due to the fact that most research conducted on this field, was performed by western scientists, and in Europe most speakers were in fact monolinguals at the time. However by widening the scope and looking to other speech communities, such as those in Africa, one would soon realize that bilingualism is in fact more common than monolingualism. There have been attempts to define what a bilingual is. An early notion of bilingualism defined by Bloomfield stated that bilingualism is native-like control in both languages (Romaine, 1995). A more recent approach to bilingualism defines bilingualism as being able to speak two languages perfectly (Hamers & Blanc, 1989). These definitions are according to Grosjean based on a monolingual conception of bilingualism, as they compare both languages to the proficiency of a monolingual. Grosjean defines bilinguals as using “two or more languages (or dialects) in their everyday life” (Grosjean, 2010, p. 22). This definition is open ended, and the scope of what it constitutes being a bilingual is widely increased. For the scope of this paper, Grosjean’s definition seems to be quite useful, as many Norwegians tend to code-switch and borrow words from English in their everyday speech.

### 2.1 Borrowing

Lexical borrowing is a common notion in nearly all languages; Words are taken from a donor language and used in a target language. This kind of borrowing does not deprive the donor language in any way, but rather enriches the target language with new lexical items. Some may state that borrowing words from another language may threaten the existence of the target language, as native words may disappear from the vocabulary of its users. On the other hand, borrowing can also be regarded as a natural step in the evolution of language, a step that enriches the target language with new vocabulary. Nearly every language has words whose origin can be traced back to another language, even the lingua franca of modern times,

English, has a wide variety of loanwords taken from French and German, to mention a few. As we shall see, there are several different approach to the concept of borrowing.

Defining what lexical borrowing is has changed significantly over the last decade. An early definition by Haugen defines a loanword as “(...) the attempted reproduction in one language of patterns previously found in another.” (Haugen, 1950, p. 212). His definition is concerned with reproducing words from a donor language in a target language. He further divided different types of borrowing depending on their phonological and semantic characteristics. His framework for lexical borrowing will be presented in more detail in the next section. Thomason and Kaufman refer to borrowing as “(...) the incorporation of foreign elements into the speakers’ native language.” (Thomason & Kaufman, 1988, p. 21). This definition views borrowing as a kind of one-way adaptation. In cases where the structures of the native language influences the second language, they define it as *substratum interference*. A more recent definition of the concept by Grosjean states that borrowing is the integration of one language into another (Grosjean, 2010). Thus, changing the phonology and/or the orthography of a foreign word to fit into the target language. In this project, borrowed words are treated in three different categories, based on Grosjeans’ definition of loan word integration, thus treating words as completely integrated in the target language, partly integrated, and directly borrowed with no sign of integration in the target language.

Considering the hypothesis is of this present paper, it will be useful to define the act of lexical processing. This notion can be divided into two sub categories, namely processing at a lexical level, and at a sub-lexical level. Processing at a lexical level can be defined as processing at word level, looking at the whole string of letters as one. However, sub-lexical processing happens at different levels of the word. One can look at a word at the orthographic level, thus looking at the individual letter representations of a word (Carreiras & Grainger, 2004). It turns out that individuals are able to read, and understand words, even though the letter strings are re-arranged e.g. raednig. In addition, word processing can also take place at the phonological level, proven in masked priming experiments, where one has found phonological influences in visual word recognition (Ibid). One final aspect of sub-lexical processing is that of morphology. The morphological properties of a word, such as affixes and compounding play important roles in the decomposition of a word. Decomposing a word to its root, will then allow the morphemic representation to activate the mental lexicon, thus understanding what the word means (Ibid). In the present paper, the focus will be on the orthographic and phonological representations of the word, rather than the morphological.

The following sections will introduce a framework, which explains how different loanwords end up being used in a given target language. In addition, the chapter will present recent studies done on the topic of lexical borrowing, which can be applied to the present study on loanwords.

### **2.1.1 Framework for lexical borrowing.**

Haugen defined loanwords according to reproduction. He further states that the reproduction is not a mechanical imitation that takes place whenever a word is borrowed from a given language, the outcome can vary significantly in the target language. Users of a language are often not consciously aware that they are borrowing words from another language, or how the borrowed word has come into the language in question. Haugen proposes a framework in which he explains how different types of borrowing manifests itself in a target language. He calls the original source word, *the model*, which the target word is based upon. Based on the *model* word one can categorize borrowing into two different main groups; *Importation* and *substitution* (Haugen, 1950). If a speaker of a non-English language borrows an English word, which is very similar to the *model* word in such a way that a native English speaker would accept it as their own, then we are speaking of importation of words. On the other hand, if a *model* has been altered to fit into a target language we are dealing with substitution. Furthermore, Haugen classifies the different types of importations, and substitutions that he observed. Within *importation*, he separates between foreign words and loanwords. The former refers to words, which has been borrowed into to the target language without any change in the phonology, or orthography, the word is written as is (Haugen, 1950). In Norwegian, we can find words such as *vintage*, which is used to refer to old second hand fashionable clothing that is still worn today. The latter refers to words, which have been integrated in the target language by adopting its orthography (Ibid).

These different manners of word importation can be linked towards how foreign words are being implemented into the target language. The first step is that foreign words are being used in a target language as it is in the donor language, without any change to the morphology phonology, or orthography. After the word has been used by a greater section of the language community, the imported word would get more integrated into the target language, with slight modifications to its phonology and orthography, but the word would still not have grammatical inflections. The final stage consists of the complete adaptation of the word, where the spelling and phonology has changed considerably, in addition to consisting of grammatical inflections. After the third stage, the word would be considered a fully pledged



member of the target languages' vocabulary. This model illustrates the various steps loanwords take before they are fully integrated. Borrowing a word from a donor language is not something that happens sporadically, and with every word of a donor language. The process relies on several different factors that come into play before a word is used in a target language. The next section will look closer at different factors, which have an impact on what words that can be borrowed.

### **2.1.2 Social- and linguistic factors.**

As mentioned in the section above, Haugen constructs a framework, which illustrates how different kind of loans can be implemented into a target language. The next question that arises, are what factors do you have to consider when talking about lexical borrowing. Fredric Field mentions social and linguistic factors that play a role in the act of borrowing. He summarizes several key social factors for why words are borrowed into the target language; the first factor is *Cultural dominance* of the target language (Field, 2002). In the case of this project, English is a lingua franca, and has thereby a significant influence in Norwegian. Related to the dominance of English has, new domains of language use arise frequently, and in many cases, it is easier to adopt an English word for the Norwegian context, than to invent a completely new, Norwegian word. In domains such as fashion, music and sports, the cultural dominance of English is clearly seen in articles related to these topics. A corpus study on the usage of new English loanwords in Norwegian showed that fashion related articles contained 12 % English loanwords per 1000 words in running text. Concerning sport and music related articles; the former contained 19.2 % and the latter 23 %, loanwords per 1000 Norwegian words (Johansson & Graedler, 2005). The second factor Field mentions is the role of *convenience*. This plays an important role regarding integrating new vocabulary. In some cases, it may be easier for speakers of a given language, to borrow a foreign word than to create a new one in their target language (Field, 2002). One could therefore assume that the cultural dominance, language convenience and cultural domains are interconnected factors. Another factor that is considered to be of importance is that of Social *prestige*. This plays a significant role, as using English words can give persons a higher status in some social contexts (Field, 2002). Many young speakers prefer to use English loanwords in their daily speech as it can give them a higher status among their peers. This factor is also supported by Myers-Scotton, who illustrated how the French during the Norman Conquest had a significant impact on English, as French culture was in higher regard than English was at the time (Myers-Scotton, 2002). The final factor is *the lack of proper vocabulary* in the target

language. This can force speakers to use a loan word to fill the lexical gap in their own language. A reason for this is that new inventions bring with them new vocabulary, and a way to keep up with this rate is to adopt foreign words into the target language to be able to describe the items. (Field, 2002)

Another similar view on social factors comes from Donald Winford. He divides the motivation of lexical borrowing into two main categories, *need* and *prestige*. These categories reflect the same important points Field mentioned. The *need* to borrow words arises in a context where a community is exposed to new areas of cultural knowledge, where their own language does not have the proper vocabulary items to describe it (Winford, 2003). This need to modernize their language can act as a primary motivational force to borrow new words into the target language. Furthermore, the prestige of one language largely contributes to the borrowing of lexical items. In Norway, English has a great influence through popular culture and media. During the last half of the 20<sup>th</sup> century, the American way of living was viewed as a goal many strived to reach. This belief in addition to the constant stream of cultural influence through music and film, to mention a few, has given the English language a great deal of prestige.

The social factors play an important role in the act of borrowing, as it influences the choices made by a language community as to which words to use. However, Field also mentions linguistic factors that can either promote or inhibit lexical borrowing. These factors are *frequency* and *equivalence* (Field, 2002, p. 5). Frequency refers to how often a specific lexical item occurs in the donor language. A high level of frequency in the donor language will make a specific word a better candidate for borrowing in the recipient language. On the other hand, frequency can also inhibit the act of borrowing due to competition of high frequency words in the target language. If a given word has a high frequency in Norwegian, the threshold for using the English equivalent is considerably higher, and borrowing words from English will be less likely. When considering frequency as a factor of borrowing, one should take the frequency of both the target- and the domain language for a given loanword into account.

Furthermore, when frequency is considered the main factor of borrowing, the borrowed effect will primarily manifest itself with respect to the content morpheme (Field, 2002). Some languages have inflectional affixes, which decide the gender or number. When this word is borrowed, only the content morpheme, which is perceived by the speaker of the target language, will be borrowed. Field provides an example of the Spanish word ‘taco’, where the –o is an inflectional suffix which adds grammatical gender. In the U.S this word has been

borrowed, and used to describe the popular Mexican dish, however, the suffix does not play any grammatical role, and is considered to be a part of the stem (Ibid). A final remark this aspect is that frequency alone does not always portray the full picture of why a word has been borrowed. The transparency and relevance of a word can also play a crucial part in why a word has been borrowed into the target language. One could therefore assume that frequency may provide an adequate reason for borrowing, but there can still be other factors, which contribute to the act of borrowing.

The second linguistic factor Field describes is equivalence. Equivalence between the donor and target language is concerned with whether a specific item can find a structural or formal equivalent (Field, 2002). Thus, whether a noun can find an equivalent form in the target language. A notion introduced by Haugen is that nouns are the first words that tend to be borrowed, followed by verbs and adjectives (Haugen, 1950). This kind of borrowing hierarchy shows that there are certain patterns in a given language situation. Myers-Scotton claims that the reason why nouns are more frequently borrowed than other word classes is that they receive rather than assign thematic roles (Myers-Scotton, 2002). This means that the nouns are less disruptive in the target language's argument structure. Verbs, on the other hand, can be seen to be the syntactic backbone of sentence, as it acts as the predicate. Verbs are therefore heavier in terms of inflection, thus making it harder to integrate them into a target language. The loanwords included in the data set is predominantly based on nouns.

Equivalence can be defined according to two different aspects; the first aspect is that of semantic equivalence. In other words, how the loanword fits the target language semantically. Ideally, the loanword should refer to the same object or phenomena in the target language, as it does in the donor language. The second is language typology and similarity of structure. This may play an important role when the two languages are very similar in structure, e.g. Germanic languages. When a word is borrowed from English to Norwegian, a speaker would not have much difficulty in adapting the loan word into Norwegian, as both languages have a similar type of grammar. Stene states that there are two kinds of word-formations. The first one may be due to a parallel historical development, as both languages are initially based on Germanic. An example of this is the –ing ending, which is a Germanic trait that has been adopted in both languages (Stene, 1945). The second explanation has to do with the fact that the derivational suffixes used in both languages; i.e. –ist, and -istisk, in Norwegian and –ist, and –istic in English, are part of an international vocabulary of classical origin (Ibid). This means that since they use the same types of derivational suffixes, this could bridge the gap

between the languages, thus facilitating the borrowing between the languages. However, when borrowing words from a Romance language, which makes use of inflectional affixes to decide gender, the loan could pose difficulties for Norwegian speakers, as they use function words to decide the gender of a noun. A perfect match between languages is therefore, hard to come by, and speakers often have to make decisions as to how the word is constructed in the target language. Despite the need for a consensus among the speakers of a target language, equivalence can still be regarded as an important factor within lexical borrowing.

Having listed some important factors regarding lexical borrowing, it is important to mention that these factors alone are not sufficient to explain the whole process of borrowing. Lexical borrowing is a complex process, which relies on several different micro- and macro level factors, and these factors combined can give an indication on how they influence the degree and type of lexical borrowing in a speech community. Poplack et al. (1988) found that various factors such as social class and neighbourhood correlated with the rates of borrowing (as cited in Winford, 2003). This proves that several different factors are at play when regarding reasons of lexical borrowing. The present study cannot take into account all the different factors that come into play concerning loanword processing. I have therefore selected a sample of different factors; I believed to be relevant in the experiment. These factors will be described in detail in section 4.1.

### **2.1.3 Research on lexical borrowing.**

As it turns out, research that covers the topic of how speakers of Norwegian process English loanwords is rather scarce. A study conducted by Sindre B. Norås, tried to show whether English used in the Norwegian language could be labelled as code switching or as a case of infrequent lexical borrowing. In his results, which were based on interviewing students at high school level about their English usage, he separated between spontaneous borrowing, being lexical borrowing, and code switching. The study showed that Norwegian speakers controlled the English language to such an extent that one could state that English functions as a second language, with its own mental lexicon within speakers of any age (Norås, 2007). He further explains that the usage of lexical borrowing, which according to him, is a natural process in which English loanwords filled the lexical gap Norwegian words were unable to fill. He concludes that code-switching and lexical borrowing complement each other, where “code-switching may surface where the speaker chooses it (using her English mental lexicon) while the spontaneous borrowing is triggered by the non-existence of an equivalent word in Norwegian.” (Norås, 2007, p. 69). This research gives support to Field’s social factor about

lexical borrowing, where the lack of descriptive words in a new domain can force speakers of one language to make use of foreign words to fill the lexical gap.

Regarding research on lexical processing of loanwords in other languages, Tamakoa and Miyaoka conducted an experiment on the cognitive processing of Japanese loanwords borrowed from English, written in katakana. Their research was based on 24 undergraduate and graduate, native speaking, Japanese students. Their testing consisted of a lexical decision test, where they used various borrowed words from English. The loanwords were categorized according to their frequency, and whether they were similar or dissimilar to the English sounds (Tamaoka & Miyaoka, 2003). The research concluded that participants did not react differently to words, which were phonologically similar or dissimilar to the English original word. This indicated that Japanese speakers did not activate a lexical representation of English while processing Japanese loanwords adopted from English. However, an interesting finding was that the Japanese participants were slower to respond to loanwords, which were not found in the Japanese loanword dictionary, i.e. loanwords that were borrowed directly from English (Ibid). This indicates that loanwords with low frequency are processed at a slower rate than words with a high frequency in Japanese. This result supports my initial assumption that Norwegian native speakers will process fully integrated loanwords faster than words, which have not been fully integrated.

Ellen Bialystok et al. investigated the transfer of phonological skills in bilinguals, which have two languages that do not share the same writing system. In this case, they were dealing with English and Chinese bilinguals. They tested three groups, two in Canada, one bilingual (English/Chinese) and one monolingual. A third bilingual group (Cantonese/English) was tested in Hong Kong. All the test subjects were in the age span of kindergarten – 1<sup>st</sup> grade. The participants were tested on phonological awareness and word decoding tasks in English and Chinese. The results showed that the decoding ability of each participant developed separately for each language as a function of proficiency, and this did not transfer to the other language (Bialystok, Luk, & McBride-Chang, 2005b). This proved that bilingualism did not have a significant effect on learning to read in two different languages. However, performance relied on the structure of the language, and the proficiency the participant had in the respective language. It showed that phonemic awareness skills, transferred positively across the languages. Even though the present study does not use words from two languages that have different writing systems, the results could still be applied to the project, as one of my predictors for the experiment is English and Norwegian proficiency. The issue of whether

these factors have an effect on the processing of loanwords are being addressed in chapter 5.0. A preliminary assumption could point to the fact that a higher level of proficiency is connected to how many words, foreign or not, a speaker can accept in his or her own language.

Another study performed by Bialystok compared four groups of 1<sup>st</sup> grade children (131 participants) on early literacy tasks, where three of the four groups consisted of bilinguals. The aim of this study, differs slightly from the one previously mentioned, as she compared early literacy in bilinguals who used languages that had a similar writing system. The results from this research showed that there were two significant benefits being bilingual, concerning early acquisition of reading. When compared to monolinguals, the study showed that bilinguals tended to have a better understanding of reading and how the different forms can be interpreted, and decoded into meaningful language. (Bialystok, Luk, & Kwan, 2005a). The second point of interest is the potential for transfer of reading principles across the different languages. The study showed that literacy skills with focus on word decoding, only transferred if the two languages have the same or similar orthography. (Ibid). This finding can indicate that speakers of Norwegian, who are quite proficient in both Norwegian and English, can transfer their Norwegian reading skill and apply this to reading English loanwords, as both languages share the same type of orthography. This would then account for a faster reaction time in the present experiment.

The present study will measure how fast native Norwegian speakers process English loanwords, and whether there is a difference between the type of stimuli participants get and how they respond. Based on the theories, and the research conducted, regarding the topic of this project, some assumptions could be made concerning which predictors may have an effect on loanword processing. Consistent with the findings of Tamaoka & Miyaoka (2003), word frequency will play an essential role regarding the reaction times in the experiment, as a higher frequency will indicate that the word is more familiar for the speaker; I expect that the degree of Norwegization will play a role. In addition, consistent with the transfer of skill which Bialystok et al. (2005a) sought out to investigate, my expectation is that Norwegian and English being two languages that use the same writing system, will turn out to have a facilitatory effect. According to the hypothesis, there should be differences in how various loanwords are processed by native speakers and the results should give indications of which factors are involved in the act of reading, and recognizing the loanwords in question.



### 3.0 Method

As mentioned in the hypothesis, the aim of the project is to discover whether Norwegian speakers process English loanwords differently depending on how Norwegianized the word form is. The experiment relies on quantitative method, involving 40 participants, who were tested at the acquisition and language-processing lab at NTNU.

#### 3.1 Participants

The sample consisted 40 students, 17 males and 23 women, who had a mean age of 24,9. These were recruited from the local university here in Trondheim. Ideally, the sample should have consisted of a 50/50 split between the sexes, but unfortunately, due to time constraints and lack of participants, I could not rely on a randomized sampling method for the experiment. Having a 50/50 split would have been most beneficial as it grants access to a varied sample of the population, and the participants would then be independent of one another (Langdridge & Hagger-Johnson, 2009). In the case of this experiment, the *snowball* method was applied, because it was the most beneficial method of obtaining enough participants given the time. The sampling method revolves around recruiting participants in the near proximity and ask these individuals if they can recruit their friends. A deficit with this method is that is not likely that one can obtain a representative sample of the population (Langdridge & Hagger-Johnson, 2009). However, the sample could still provide an indication of how the population processes loanwords in the given context. All the participants included in the sample were native Norwegian speakers, who all were second language (SL) speakers of English. Three participants were also bilingual. All the participants have had English instruction from the Norwegian primary school up until upper secondary school.

#### 3.2 Procedure

In the preliminary stages of the experiment, a list consisting of 120 English loanwords used in Norwegian was compiled, based on Norwegian loan word dictionaries (Johansson & Gradler, 2002; Sandøy, 2000). The words used were chosen in light of the hypothesis, where the degree of integration, would predict how the test sample would react. A complete list of all the words used in the experiment can be found in appendix I.

The words were divided by the experimenter, into three different categories based on theoretical considerations; the first category consisted of loanwords, which had slight orthographic and phonological changes, compared to the English original. These words are well integrated into Norwegian and are commonly used in newspapers and magazines, so a Norwegian speaker would have come across these words quite often. An example of such a



word is *konteiner*, which is the English equivalent of *container*. The second category consisted of loanwords that had significant orthographic and phonological changes. Some of these items are examples of loanwords that have been implemented into the Norwegian language by governmental institutions, such as *Språkrådet* in an attempt to *norwegianize* loanwords. These words are often regarded as unpopular by Norwegians, as they tend to have an orthography, which does not appeal to the native speakers. An example of such a word is the Norwegian *tøtsj*, which is the equivalent of the English word *touch*. The final category consisted of a baseline, compiled out of words, where the English orthography is preserved. These type of loanwords are typically loanwords, which recently have come into the Norwegian language and are commonly used by younger speakers in informal settings. This can be related to the fact that there might not be a suitable Norwegian equivalent, or that younger people prefer using English word as it could give them status in their speech community. The categories mentioned are those that are being used throughout the analysis.

In a pilot pre-test, the words from the original list were rated by 20 native Norwegian speakers based on how often they used the loanword in question and how Norwegian the word appeared to them. The rating consisted of using a 7-point Likert scale, where participants rated each word individually twice. One time for usage and one time for familiarity. Using a Likert scale allows for an effective and easy way to collect reliable data for the experiment, as it allows for the elimination of irrelevant data from the questionnaire (Langdridge & Hagger-Johnson, 2009). In the first set of rating the word; ‘how often do you use the word’, participants had to rate how often they used the word, where 1 = not at all and, 7 = very frequently. In the second set they rated according to how Norwegian the word seemed to them, where 1 = not Norwegian, 7 = very Norwegian. The data found here, will be discussed in the Results chapter.

### **3.3 Experimental design**

The 120 words, rated in the first stage of the experiment, were compiled into an experiment in addition to 120 non-words (totalling 240 items). Every real word had a non-word equivalent that was of the same orthographic length as the respective real word. The basis for the non-words was that they sound Norwegian but do not have a meaning. As mentioned, the experiment took place at the acquisition and language-processing lab at NTNU. The lab was used throughout the experiment. The usage of this facility creates an environment equal for all participants, in order to exclude outside factors, which may be seen as distractive. Participants were seated in front of the computer, where all the test phases were conducted. The whole

experiment consisted of four separate tests, two experimental tasks, and two proficiency tasks, in addition to a background questionnaire, which was to be filled out after the testing was completed. These steps will be described in more detail in the next sub-chapter.

### **3.3.1 E-prime.**

The experimental tasks consisted of using the computerized experiment program E-prime version 2.0 (Schneider, Eschman, & Zuccolotto, 2001). The first test was the primary part of the experiment consisting of a lexical decision task. All words were randomly presented on the computer screen, 500 milliseconds after a fixation cross. The participants were instructed to decide whether the word on the screen was a Norwegian word or not, as quickly and accurately as possible. Responses were recorded by having the test subjects press the 'yes' or 'no' key on a serial response box (SRBox). The words shown were picked randomly from the three groups of words mentioned above, including the non-words, using E-prime 2.0. In each session, 16 practice trials were given before the actual experiment. The main variables, which were recorded by the program, were reaction times and errors made by each participant. These results will be further analysed in the next chapter. The next step in the experiment consisted of a vocabulary test called Lextale (Lexical Test for Advanced Learners of English), and was conducted using E-prime (Lemhöfer & Broersma, 2012). The Lextale test functions much like the first lexical decision task; participants were shown a word in English, and had to decide whether the word was English or not. This yes/no test provides a valid representation of a participant's vocabulary knowledge.

The final two tests were proficiency tasks. The first task was conducted using the 'word dynamo challenge', an internet based test where participants were to choose the correct definition of an English word by pressing on 1 of 4 alternatives using a computer mouse. (Dictionary.com, 2013) This test roughly calculated a participant's vocabulary size. Based on the time and percentage of correct answers a score was provided, which indicated at which school level the word proficiency of the participant was. In the Norwegian education system, English is a compulsory subject from elementary school, up until the first year of upper secondary school; the test was therefore based on Upper Secondary level, as all the participants would have had English instruction at this level. In the last section of the experiment, participants were to complete an online grammar test that tested the participant's English grammar in use (Murphy, 2013). In the test, one was shown a sentence with a blank field; the objective was to fill in the blank by choosing one out of three proposals. There were 50 sentences in this test, and the score was based on the amount of correct answers, not

relying on the time spent. The two proficiency tests mentioned above were conducted in order to objectively assess each participants' level of English proficiency. The results were then to be used, in order to see whether proficiency has a role in the processing of loanwords.

In the final stage of the experiment, the participants were asked to fill out a background questionnaire, where they answered questions about their linguistic background, their level of proficiency in reading, writing, listening, and usage in both English and Norwegian. In addition to rating their subjective language skill, the questionnaire also asked them to rate whether they have lived abroad in an English speaking country or not, and whether they were bilingual or multilingual. The data was coded and added to the analysis of the experiment. For the complete questionnaire, see the appendix.

### **3.4 Statistical procedure**

After the whole sample was tested, the data from the experiment and the background questionnaire, was coded onto excel. All the data was analysed using generalized linear mixed models with logistic regressions and binomial variance. The program and packages used to conduct the analysis was R (R Core Team, 2012), *language* (Baayen, 2011) and *lme4* (Bates, Maechler, & Bolker, 2012). The analysis relied on several different predictors that were gathered throughout the experimental phase. These predictors will be described more closely in the results section.

## 4.0 Results

The following section will describe which predictors were used in the analysis, how the data was analysed, in addition to explaining which model gave the best results.

Prior to the analysis of the results, two exclusion criteria were used to remove target words and participants, which could not be included in the data set. According to the first criterion all target words which had a high number of errors (>50%) were discarded from the data set. Participants who had a high number of error responses (>59%) were also excluded. This resulted in the removal of the following target words (*alien, jass, kjangs, køntry, matsj, medley, overkill, play, research and tøtsj*). In addition to this, participant number 14 was also excluded from the data set. The final data set then included some missing responses, but contained 39 participants who each responded to 110 target words. The data set was inspected by using a linear mixed model (using R's *lmer* function) (Baayen, 2008). The usage of generalized mixed models provide a robust method of analysing the experimental data with unequal number of observations.

### 4.1 Predictors

For the experiment, several different predictors were considered in order to figure out how Norwegian native speakers' process English loanwords and whether there is a difference in how various loanwords are processed. The main dependent variable used to measure this was reaction times (RT). A second dependent variable was accuracy. The experimental design was a straightforward lexical decision task, which measured how fast and accurately participants responded to different loanwords in Norwegian. The RT's could then be analysed using different predictors that were gathered throughout the experimental phase of the current project. The first predictors that were expected to affect the processing of the target words where the experimentally obtained *native speaker judgements*. (See section 3.2 *Procedure* for explanation). The next set of predictors was related to the *properties of items*: these included non-subjective frequencies of the loanwords, per million, in both English and Norwegian. These frequencies were obtained by using an English and Norwegian Corpus (Davies, 2008; Nasjonalbiblioteket, 2012). In addition, predictors such as word length and percentage of letters shared between the English original- and the Norwegian loan word were obtained. The final predictor that was included into the experiment design was the word category each word belonged too.

In the actual experiment, experimental predictors that assessed second language competence were gathered. These included *grammar knowledge, vocabulary size, and vocabulary*

*knowledge* (these were obtained in the proficiency tests). During the experiment, the amount of *trials* conducted by each participant was also used to predict the possible outcome of the test. The final set of experimental predictors were self-reported scores on each speakers' own proficiency rating, obtained in the questionnaire. Scores concerning each participant's Norwegian usage, including reading and writing. English proficiency skills and usage, including reading, writing, speaking and listening skills, in addition to whether they were bilingual or not.

The predictors mentioned above were those that I suspected would play a role when it came to the processing of the different loanwords. As mentioned in the introduction, my preliminary assumption was that the level of foreignness would predict reaction times and error rates. The next section will give a detailed account of how the models were constructed and what results they provided.

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**Table 1| Mean reaction times and standard deviations for categories**

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	Reaction times	Standard deviations
Category 1	1237.618 ms	1147.551
Category 2	1209.799 ms	1251.840
Category 3	1363.215 ms	1265.683

Note: Categories refer to the grouping of the different items. Category 1 = items with slight orthographic and phonological change, Category 2 = items with significant orthographic and phonological change, Category 3 = items with no change, they are written the same in both Norwegian and English.

#### **4.2 Reaction times**

For the analysis, I was concerned with two different performance variables: reaction times and error rates. These were used as dependent variables in the analysis. The results of the latter will come later in the chapter. For the analysis of reaction times, items and subjects were treated as a cross-random factor in order to allow for a by-item and a by-subject variation in the model (Baayen, 2008). The first step was to create a rudimentary mixed model on inverse transformed, where I compared one model containing only random intercepts alone to the a model including the categories as factor. A likelihood ratio test (ANOVA function in R) was applied, and it showed that the model consisting of only random intercepts was a better fit than the model containing the categories as a predictor. This was indicated by the Chi-square value of the model containing *categories* as a fixed predictor, ( $\text{Chisq} = 2.3774$ ,  $p > 0.3046$ ). This showed that there was no significant interaction between the cross random factors and the category each item belonged to. This is also illustrated in table 1, which shows

that there is no significant correlation between item category and RTs. The category factor was therefore removed from the reaction time analysis. See next chapter 5.0 for a discussion on the topic.

The next step in the analysis was to model in the various predictors, which I assumed might have an effect on the results. Based on the previous model, which gave the best fit, several different predictors were included, and compared to see which ones had a significant effect on the results. The predictors that were included constituted of the native speaker judgements, the properties of items, and grammar, and vocabulary knowledge. I made use of a backwards elimination process, in which the predictors that had a t-value ( $< 2$ ) were removed from the model, as they did not reach significance. An ANOVA test showed that the subjective Norwegian-status-of-word judgement and the vocabulary test were random factors,  $\text{Chisq} = 0.1642$ ,  $p > 0.9212$ ; further testing also showed that the Lextale test, which aimed at testing the vocabulary knowledge, proved not be significant with regards to reaction times,  $\text{Chisq} = 1.4897$ ,  $p > 0.2223$ . Using the ANOVA compares the goodness of fit; each model has to each other, in addition to taking the cost of extra parameters into account (Blom & Baayen, 2012). In order to explore the data further, I used the following predictors: Norwegian frequency, the scores from the grammar test and the amount of letter shared, which were log transformed. This gave the best suitable model based on the predictors, which were gathered before- and during the experiment. Furthermore, predictors of each participants English and Norwegian language usage were also included; however, these did not prove to have any significant effects on the participants' reaction times, due to t-values ( $< 2$ ). In the final step of analysing reaction times, two models were compared, one containing random slopes for trials, for each participant, and one without the random slope, using ANOVA. The test showed that the model containing random slopes for trials was the best fit. ( $\text{Chisq} = 46.241$ ,  $p < 0.001$ ) This resulted in providing the most suitable model for the analysis of reaction times, see table 2.

**Table 2 | Results from the statistical analysis on reaction times**

R command:  $lmer4c = lmer(1/RT^*-1000 \sim cTrial + Length + HowNorwegian + \log(NorFreqMill+1) + \log(GrammarTest) + \log(LettShared) + (1+cTrial|SUBJECT) + (1|ITEM), data = dat1[dat1\$RT \leq 3000,], REML = F)$

	Estimate	Std. Error	t-Value
(Intercept)	9.4466754	2.5083087	3.766
cTrial	-0.0001618	0.0001499	-1.080
Length	0.0270035	0.0057667	4.683
HowNorwegian	-0.1410262	0.0109271	-12.906
log(NorFreqMill + 1)	-0.0264604	0.0119096	-2.222
log(GrammarTest)	-2.5427368	0.6541523	-3.887
log(LettShared)	-0.0882245	0.0251713	-3.505

Note: explanation of predictors; cTrial = amount of trials completed, Length = the length of the letter string, HowNorwegian = the subjective native speaker judgment on how Norwegian the loanword is, log(NorFreqMill + 1) = Norwegian corpus word frequency divided by 1 million, log(GrammarTest) = Test which assessed participants grammar knowledge in English, log(Lettshared) = the amount of letter shared between the English original word and the Norwegian loanword.

Due to limitations in the version of lme4, MCMC sampling could not be implemented for models with random correlation parameters. Therefore, only the T-values are taken into consideration concerning the reaction time analysis. Table 2, illustrates which predictors facilitated into either faster or slower RTs. It turned out that completing more trials resulted in a reduction of response times. This can be interpreted, as a trivial finding in this context, as doing something repetitively will eventually lead to an understanding of how something works. On the other hand, what was a trivial finding was the length of the word, which had the opposite effect on reaction times. As the results illustrate, participants responded more slowly to longer letter strings, than to shorter. The most significant finding, concerning reaction times, was the subjective rating of how Norwegian the loanword is. As it turns out from the analysis, respondents reacted significantly faster to loanwords that seemed Norwegian, as opposed to items that were not rated as being Norwegian. Concerning the native speaker judgment on how Norwegian the loanword was, it is interesting that the word frequency did not show an equal effect on reaction times. Even though a high frequency resulted in faster reaction times in the experiment, one could assume that the effect of frequency would have been greater. As it turned out, the level of grammar knowledge and the amount of letters shared between the English original and the Norwegian word tended to be more significant, in terms of reaction times, than the frequency was. A high level of grammar knowledge and more letters shared between the English and Norwegian word, facilitated into faster reaction times for the test group. Chapter 5 will discuss these results and present possible solutions to their significance regarding reaction times.

### 4.3 Error analysis

In the next model, the error rates were analysed. According to my own assumption, participants would have higher error rates in category 3 loanwords compared to the other categories. This is revealed in Table 3. The results from this table show less errors in the first category and a gradual increase in category 2 and 3. This partly supports my initial thoughts that participants would have more difficulty processing loanwords, which have not been completely integrated into Norwegian.

**Table 3| Error rates per category**

	Category 1	Category 2	Category 3
Correct responses	1342	1207	1032
Incorrect responses	258	393	568
Error percentage	16.1%	24.5%	35.5%

Note: Categories refer to the grouping of the different items. Category 1 = items with slight orthographic change, Category 2 = items with significant phonological change, Category 3 = items with not change, they are written the same in both Norwegian and English.

In the reaction time analysis, the predictor of categories did not to have any significant effect on the results. However, Table 3 illustrates that categories may be a predictor regarding error rates. For the error analysis Errors, categories were again used as a fixed effect in the model, in addition to keeping trials and subject as random slopes in the model. The analysis showed that category 1 loanwords had a significant effect on the results ( $\Pr(>|z|) < 0.001$ ). However the second and third category of loanwords did not have any significant effect on the results ( $\Pr(>|z|) > 1$ ). Even though Table 3 illustrates that there is some correlation between the amounts of errors per category, the analysis proved that these findings were in fact random. Category as a predictor was therefore also omitted from the error model.

Further analysis was done on which factors that had an effect on the amount of correct response a participant gave. The predictors that proved to be significant in the reaction time analysis were included in the model. In addition, I included how often each participant writes English and Norwegian, to see whether writing in a language facilitated accuracy. Vocabulary knowledge was also included as a predictor, as one could assume that higher vocabulary knowledge would result in more responses that are correct. However, it turned out that the usage of written English ( $\Pr(>|z|) > 1$ ) and vocabulary knowledge ( $\Pr(>|z|) > 1$ ), did not have any significant effect on the results, they were therefore removed. Trials as a predictor was



also tested in a random structure, in addition to creating a model in which all the fixed effects were removed except trials. An ANOVA test of the different models showed that the model in which trials was set in a random structure, gave the best fit, ( $\Pr(>(\text{Chisq}) < 0.01$ ). Table 4 gives an illustration of the most salient fixed effects, when it comes to loanword processing.

**Table 4| Results from the statistical analysis**

*R command: lmer7bbin = lmer(Errors ~ cTrial + Length + HowNorwegian + log(NorFreqMill+1) + Lextale + GrammarTest + Nor\_Write + (1+cTrial|SUBJECT) + (1|ITEM), data = dat, family = binomial)  
print(lmer7bbin, cor = F)*

	Estimate	Std. Error	z value	Pr(> z )	
(intercept)	18.2873095	3.3821404	5.407	6.41e-08	***
cTrial	0.0010995	0.0008999	1.222	0.221823	
Length	-0.1904183	0.0566666	-3.360	0.000778	***
HowNorwegian	-1.5345487	0.1038546	-14.776	< 2e-16	***
log(NorFreqMill + 1)	-0.4061151	0.1431328	-2.837	0.004549	**
Lextale	-0.0277021	0.0122404	-2.263	0.023625	*
GrammarTest	-0.1436834	0.0668435	-2.150	0.031591	*
Nor_Write	-3.0644656	1.1522622	-2.660	0.007825	**

Note: Significant codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Explanation of predictors; cTrial = amount of trials completed, Length = the length of the target word, HowNorwegian = the subjective native speaker judgment on how Norwegian the loanword is, log(NorFreqMill + 1) = Norwegian corpus word frequency divided by 1 million, Lextale = vocabulary knowledge test, GrammarTest = Test which judged participants grammar knowledge in English, Nor\_Write = How often one writes Norwegian.

Table 4 represents the final selected model from the statistical analysis. Compared to table 2, trials did not prove to be a significant factor, even though reaction times tended to decrease, as the amount of trials increased. Concerning errors, the amount of errors did increase over time, although not significantly, as the focus and concentration of a participant may decrease. The two predictors, which I also found relevant in the previous analysis, that turned out to be the most significant ones in the errors rate analysis, were the word length and the subjective rating on how Norwegian the word was. ( $\Pr(>|z|) < 0.001$ ). The following factors of corpus frequency, and how often you write Norwegian seemed to have a slightly less impact on the results, but were still significant, even though written Norwegian usage did not seem to have an effect on reaction times. ( $\Pr(>|z|) < 0.01$ ). The final two predictors, that were somewhat significant, was the grammar knowledge- and the vocabulary knowledge tests. ( $\Pr(>|z|) < 0.05$ ). Concerning error rates, it seems reasonable that these predictors are important, as they may decrease the amount of errors made in the experiment.

A preliminary remark is that it seems my initial hypothesis, stating that the word categories, which were based on theoretical considerations, would be one of the most salient factors in the experiment, was incorrect. However, the results showed that the most important factors were in fact word length, native speaker judgement on how Norwegian the loanword was, word frequency as reflected in corpora, grammar and vocabulary knowledge, and writing Norwegian. The next chapter will seek to explain the importance of these predictors, and provide possible solutions of what effect they have on loanword processing.



## **5.0 General Discussion**

The experiment was based on two dependent factors, Reaction times and error rates. The following chapter will discuss the various predictors that turned out to be significant for both reaction times and error rates.

### **5.1 Discussion of results**

The main aim of this study was to explore whether certain loanwords are processed differently depending on the degree of foreignness in the target language. According to the hypothesis, the rate at which loanwords are processed will differ significantly depending on how well they are integrated in the target language.

The results showed that several different predictors did have a significant effect on loanword processing. However, what I initially assumed to be the main predictor, being the word categories I created for this project, did not have a significant effect in the different models that were constructed. The first category consisted of loanwords, which differed slightly concerning its orthography and phonology. The second category consisted of loanwords that had significant changes to the orthography and phonology. The last category contained loanwords that were written the same in both Norwegian and English with no change. The assumption was that loanwords, belonging to the first category of loanwords, would have had the fastest reaction times, followed by category 2 words. Loanwords belonging to the third category would then be processed slower than category 1 and 2 loanwords. An early analysis of the mean reaction time for each category showed that this assumption had certain flaws. See table 1. As it turned out, loanwords belonging to the second category were processed at a faster rate than words in category 1. This, in addition to results, showing that the predictor had a random effect on the models, led me to discard the categories as a factor in the experiment. A possible solution as to why this predictor was not significant is that I did not account for the loanword frequency in creating the different categories. However, the factor that did turn out to be the most important one was the native speaker judgement the words status of the loanwords. A discussion about this predictor will be presented later in the chapter.

Turning towards the results illustrated in the analysis, each predictor will be explained in detail, and possible explanations concerning their importance will be presented.

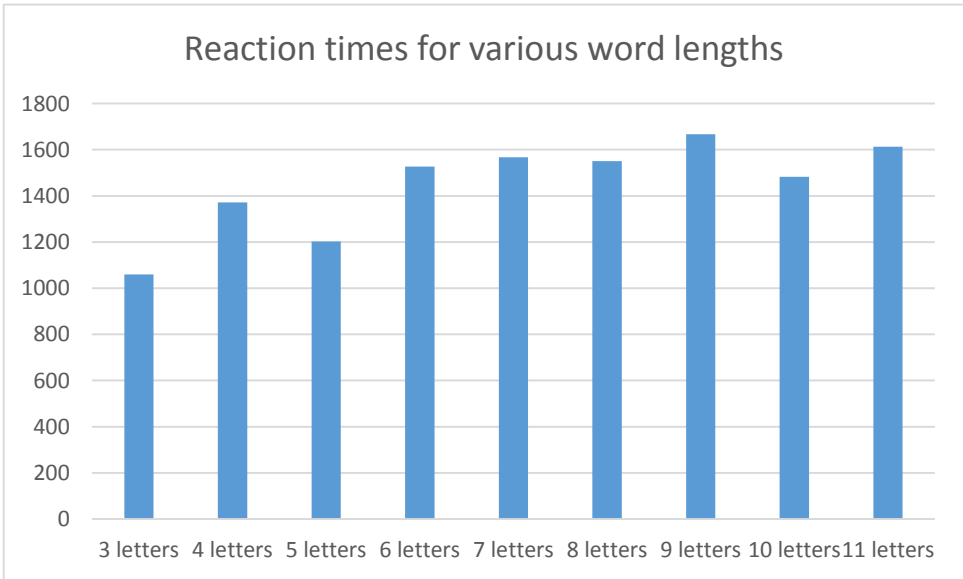
#### **5.1.1 Trials and word length.**

Even though the initial assumption failed, the experiment still gave some indications on which factors play a predominant role in loanword processing. Some trivial factors that are worth

noting is that participants tended to respond faster depending on the amount of trials completed. The stimuli was presented in a random order, but as participants completed more trials, the responses tended to be faster as they got used to the construction of the experiment. Even though, this predictor accounted for faster reaction times, it did not prove to be significant in the error analysis, as it was rated as a random factor. An explanation for this tendency is that the responses may become more random, as the concentration and focus of a participant may decrease over time, thus explaining why it did not prove to be a significant effect.

One finding that turned out to be of major significance is word length. Shorter letter strings resulted in faster reaction times and longer words facilitated into longer reaction times. Longer letter strings will acquire participants to spend more time reading and analysing the word before giving their response. The average length of the words included in the experiment was 6.275. A study conducted on the effect of word length in lexical decision tasks, showed that word response times were longer for short words (3-4 letters) and for long words (9-13 letters), as compared to words ranging from 5-8 letters (New, Ferrand, Pallier, & Brysbaert, 2006). This research showed a U-shaped curve in reaction times where the lowest point was between 5-8 letter words. The research showed that there is a gradual increase in RT's from the onset of 5-letter words.

**Table 5 | mean reaction times for different loanwords**



Note: y-axis: amount of letters in the loanwords. X-axis: reaction times in milliseconds.

My own research showed that shorter words, overall, had faster reaction times than longer words, see table 5. Even though my results are not equal to the results presented in the study on the effect of length in lexical decision tasks, a larger amount of participants and more test items could have provided different results (New et al., 2006). It is important to keep in mind that word length alone, is not a sufficient explanation for how fast the loanwords were processed. A high frequency word, which has a longer letter string, may be processed faster than short words that have a low frequency in the target language. However, length and frequency can be seen to interact with each other, each partly explaining why some words are processed differently from others.

### 5.1.2 Norwegian-status-of-word.

As mentioned, word length was not the only predictor that turned out to have a significant effect on the responses. An interesting finding was that the subjective rating, on how Norwegian the loanword was, correlated highly with the response times and turned out to be the most significant predictor when it came to error rates ( $p < 2e-16$ ). The rating can be interpreted as indicating the status, the loanword has in Norwegian. A high subjective rating of a given loanword, also gave significant improvements in reaction times for each participant, whereas low frequency words resulted in having slower reaction times. The loanword ‘ålreit’, whose meaning is ‘all right’ in English, was highly rated as Norwegian by the test subjects. The mean reaction time for this word was 1265.325ms. On the other hand, a low rated word such as ‘breikdans’ which stems from the English ‘breakdance’ had an average of 2377.2ms. The results also prove that a high subjective rating provides fewer errors made throughout the experiment, as compared to low rated loanwords.

**Table 6| subjective rating and reaction times**

<b>Low error rates</b>	<b>How Norwegian</b>	<b>Reaction times - milliseconds</b>	<b>High error rates</b>	<b>How Norwegian</b>	<b>Reaction times - milliseconds</b>
Album	4.6	791.2	Interface	2.2	2027.75
Boks	6	826.375	Receiver	1.75	2279.025
Gir	5.5	972.7	Skvåsj	2.85	1811.725
Gjeng klubb	5.55	794.875	Sjarter	2.9	2231.175
	6	890.025	Label	2.2	1650.525
<b>Average</b>	<b>5.53</b>	<b>855.035</b>		<b>2.38</b>	<b>2000.04</b>

Note: The rating of *how Norwegian* a word was, was rated according to a 7-point likert scale, 1 = least familiar, 7 = highly familiar

Table 6 shows a sample of 5 loanwords with the least errors and 5 loanwords with the highest amount of errors. As the table illustrates, words that have the least errors, tend to have a high

subjective rating of how Norwegian the word was, in addition to having low mean reaction times. On the other hand, words that turned out to have the highest amount of errors in addition to, having high reaction times e.g. interface, receiver etc. were rated low in terms of how Norwegian it seemed. This provides evidence that the native rating is one of the most important predictors concerning loanword processing. Another aspect worth mentioning is that the words, which had the least errors, did not belong to a specific category; the same applies to the loanwords with the most errors. This further indicates that the categories as a predictor failed. What can be summarized from table 6 is that the rating provides an indication of how familiar the loanword is for native speakers, which in turn interpreted as how well the word is integrated in the target language. A low rating would indicate a high level of foreignness for Norwegian speakers, while a high rating reflects a highly integrated loanword. As it turns out from Table 6, the highly rated loanwords are all *old* loanwords, meaning that they have existed in Norwegian for quite some time, thereby accounting for the high level of integration. Concerning the hypothesis, loanwords that are familiar, will be processed faster than loanwords that are considered foreign. This assumption is supported by the recent findings in the analysis of subjective ratings.

### **5.1.3 Frequency.**

Another factor that is directly related to the subjective rating of how Norwegian the word seemed, was the Norwegian corpus frequency. The data analysis showed that both of these factors had a major significance as to how fast loanwords were processed. A possible solution for this finding is that loanwords, which have a high frequency, have gone through all the stages of being integrated into the target language. These three steps, which I mentioned previously, consists of the loanword written as is in the target language, in the first stage. In the second step, the loanword has slight phonological modifications, and finally in the last step of the process, the loan word would have gotten a complete adaptation in the target language. A high level of frequency in Norwegian, would account for the fact that native speakers will accept the loanword as Norwegian and not confuse it with the English donor word. As a result, the frequency of a loanword can be directly related to how familiar native speakers find the word to be. Regarding the experiment, these two factors clearly indicate that the level of adaptation, in addition to the frequent usage of the loanwords, will account for faster reaction times in processing the loanwords. Gilhoooy & Logie conducted an experiment in which they sought out to see what factors affect the speed of lexical decisions. Their results showed that a high frequency correlated with faster reaction times (Gilhooly & Logie, 1982).

This was not done for loanword processing, but their results can still be applicable to the present study, as an indication of how frequency affects decision-making.

Looking back at the hypothesis, one of the secondary goals was if less Norwegianized orthography would result in longer reaction times. Even though one of the experiments main predictors, word categories, turned out to not yield any significant results, one can see a tendency for the fact that orthography alone does not predict how a loanword will be processed. What seems to predict responses is how integrated the word is in Norwegian. On the other hand, one should not exclude orthography based on that finding. Newly adopted words will often have the exact same spelling as in the donor language, and this will make the loanword differ from native Norwegian words. However, after the loanword is more frequently used, it may develop some orthographic and phonological features, which are common in Norwegian, and thereby increasing its level of integration. When the loanword eventually becomes commonly accepted, it may end up as being a fully pledged member of the Norwegian lexicon. Word frequency, native speaker judgements, and orthography combined may act as predictors as to how a given loanword will be processed.

One aspect that has to be taken into consideration, regarding word frequency and the Norwegian-status-of-word, we expect to find differences across age groups in terms of patterns of language behaviour. In the present study, the main bulk of the test group were university students. This could be regarded as quite the homogenous group, and can therefore be seen as not being a representative sample of the whole population. Older generations will not have had the same amount of contact with the English language, as younger generations have. This could consequently enable them to use more Norwegian words, rather than loanwords from English. In addition to this, most new domains, such as technology, where many of the new loanwords stem from, is not a sphere in which older generations venture. Thus enabling them to refrain from using specific loanwords. I will return to this matter in section 5.2 for a further discussion on this topic.

Concerning frequency and familiarization of a loanword, there were some entries, which had to be omitted from the test sample, as their error rate was too high. Some of the loanwords in question were *køntry*, *matsj*, *svkåsj*, and *sørvis*. These words represent the Norwegianized version of *country*, *match*, *squash*, and *service*. A reason why these loanwords were not accepted by the native speakers may lie in the fact that these are examples of linguistic purism, as mentioned in section 1.1. The Norwegian government's attempt to preserve the language, has resulted in loanwords, which have been directly Norwegianized, without going



through the gradual transformation, other loanwords have experienced. Native speakers may feel that these words are forced upon them, and consider them unnatural. These loanwords also scored on the lower end of the 7-point Likert-scale on the question of how Norwegian the word was, with an average score of 2.6.

Should the government's xenophobia of the English loanwords be taken seriously, or should we as a language community embrace new loanwords, and let the language develop as an organic unit, without interference from the authorities? As the results indicate, to forcefully *norwegianize* English loanwords does not seem to have the desired effect. The notion of cultural dominance and prestige, as Field points out, may have a significant effect on the frequency of loanwords. Using English loanwords may elevate the social status of young speakers within their speech group; this will in turn increase the frequency of the loanword, as it may be used in more contexts (Field, 2002). Bystanders of this process may consider this as signs of decline in the usage of their native language. However, Hans H. Hock states that; “[a] very common result of linguistic contact is vocabulary or lexical borrowing, the adaptation of individual words or even of large sets of vocabulary items from another language or dialect.” (Hock, 1991, p. 380). Using loanwords can therefore be stated to be a natural development of a language, and as the national borders grow smaller, due to social media, and new technology, more words may end up being borrowed from a given donor language to a target language. I therefore suggest that the frequency of a word can be interpreted as the degree of integration the loanword has in the target language.

#### **5.1.4 English proficiency.**

The hypothesis also sought to find evidence for the fact that, the English proficiency would predict how participants would respond to the loanwords. The lexical decision test in English (Lextale), which is an experimental way of assessing the participants' reaction to English words, proved to a significant contributor in processing the loanwords. Results from the analysis of the *Lextale*- ( $p=0.0236$ ), showed that high scores in these tests corresponded to faster reaction times, and less errors. Lextale can also be viewed as a tool to measure the written knowledge, as one has to read a word and process it. This is then tied to the word orthography. One could therefore state that the Lextale acts as a measure to assess a participants' vocabulary knowledge. An assumption that can be made, based on the result is that fast response times is related to the respective proficiency of the test subject. Bialystok et al. found the same result in their research on transfer of phonological skills in bilinguals, using languages with different writing systems. The results showed that proficiency in the

other language had an effect on how well they performed (2005b). Even though this was done with two languages that had different writing systems, the present experiment showed that this might also apply in the case where the two language systems are the same.

It would be fair to assume that grammar knowledge can act as an indicator of a persons' overall language competence. In present project, the grammar test sought to measure the grammar competence in a speakers' L2, which in this case was English. As the project results reflect, *grammar test* ( $p=0.0315$ ), having a high language competence in English means that a speaker uses the language at a regular basis, thereby enhancing their receptive- (reading and listening) and productive skills (writing and speaking). As these skills increase, the user will be able to process different words faster, hence being able to process the loanwords faster. In addition to the importance of grammar, the Lextale acts as an indicator of vocabulary knowledge. It is a commonly known fact that the receptive vocabulary is often much larger than the productive vocabulary of a speaker. The Lextale measured the receptive vocabulary, so a high Lextale score may not be representative of their productive vocabulary. Despite the fact that speakers may not use all the words regularly, they are still able to grasp the meaning of the word, and put it in a relevant context. Increased understanding of what different words mean in both languages, English and Norwegian, may also increase the usage of loanwords in everyday speech. A higher proficiency can also result in more, frequent occurrences of direct loans from a donor language, due to a larger mental lexicon. What these results indicate is that an increased language competence in the second language, accounts for an increase of the processing of loanwords.

#### **5.1.5 Writing skill.**

The final factor that turned out to be a significant predictor was how often each participant wrote texts in Norwegian ( $p=0.0078$ ). Following this result, a possible explanation for this tendency is that the writing skill, may reflect a speakers overall Norwegian lexical competence. In addition, writing skill may reflect the orthographic knowledge a speaker has. It is interesting that, the subjective rating of writing usage, turned out to be significant, and not the rating of reading. An explanation to this fact is that reading and writing are two psycholinguistic processes that are connected. In order to produce a written text, one has to rely on reading other written materials. Research on level of comprehension and production of argumentative texts showed that there were significant coefficients between reading and writing of argumentative texts (Parodi, 2007). However, reading Norwegian turned out to be a random variable in the experiment. One could assume that the reason for this is that the

ratings were subjective for each participant. A standardized reading test could have shown that there is a correlation between reading and writing in the present study.

Keeping in mind that reading and writing are connected to each other, one could assume that a higher writing skill in Norwegian may allow for a transfer of that skill towards English. This is supported by Bialystok et al. where they look more closely at literacy skills in bilinguals, using two languages, which use the same writing system. They found that bilinguals could transfer their reading principles across languages (Bialystok, 2005a). The studies mentioned are not specific to loanword processing, but the basic process for both native words and loanwords remains the same. The level of writing skill in Norwegian can also be seen in connection with word frequency. A higher frequency of a loanword would account for a higher usage of the word in a native user's written language, thus making the word more integrated into the native language.

In younger generations in Norway, the usage of English loanwords in texting is on the rise. Moreover, if one were to investigate the amount of loanwords used in this context, one could assume that it would be a considerable amount. In Sindre Norås' project, he tried to uncover the usage of English in Norwegian speech, and whether this was a case of code-switching or lexical borrowing (Norås, 2007). Based on what the present study has found, and his attempt to look at the matter, it would be interesting to look closer at the rate of which English loanwords enter Norwegian, and how extensive the usage of loanwords is, depending on the age of acquisition of the L2. A conclusion that may be drawn from the result found in this section is that a transfer of skill from Norwegian to English may then speed up the process of recognizing various loanwords and use them in the target language.

#### **5.1.6 Importance of the findings.**

As the present study has shown, there are several different factors, which come into play, when a speaker of Norwegian processes English loanwords. The predictors that have been included all proved to have a significant effect on reaction times for each participant. An important aspect to consider now is what the relevance of these findings are. As it turns out, word frequency, language competence in the donor language and target language, and the subjective rating of how Norwegian the word was, tend to be the most significant predictors in loanword processing. This indicates, that the level of integration, the loanword has in the target language is important, concerning its usage by the speech community. Another conclusion, which can be drawn from the results, is that loanwords have to enter the target language in a natural way in order to be accepted as loanwords. Indications from the results

show that loanwords, which have been forcefully changed, due to linguistic purism tend to be processed more slowly. Looking back at the hypothesis for the project, I asked why not all loanwords are treated equally. As the results show, the processing of different loanwords is not necessarily dependent on how it is spelled, but on the overall language competence of a speaker, the frequency of its usage, and whether or not it is accepted by the speech community. These factors can all be regarded as being dependent on each other. Despite the fact that this study did not compare loanwords of various levels of integration, i.e. looking at the frequency of usage and categorizing them according to this factor, one can still see some tendencies, which apply to the different loanwords.

Should one have to fear the demise of the Norwegian language, due to the significant impact English has on the language? As the results show, words, which have been fully integrated into Norwegian, often have a Norwegian phonology, and orthography. As I mentioned previously, borrowing words across languages is a natural phenomenon and can be considered part of the evolution and development of a language. In order for a loanword to be used by the greater body of a speech community, it has better chances if they are used more frequently. With this in mind, using the loanword more frequently may therefore result in small orthographic and phonological changes, during a long time span. What the project thus suggests is that loanwords, which have been fully integrated into the target language, will be processed faster and more accurately.

## **5.2 Issues and further research**

The results proved that the most important predictor of reaction times was the native speaker judgement of how Norwegian the loanword appears. As I already mentioned, this factor gives us an indication of how integrated the word is in Norwegian. It is quite interesting that my initial thoughts on what the main predictor would be, failed. The act of categorizing the words out of theoretical considerations, with phonological and orthographic differences, in addition to introducing a baseline, proved to have no significant effect on the loanword processing. A reason why this factor did not turn out to be significant may be connected with the fact that the premises were incorrect. In the creation of the categories, I relied solely on orthographic and phonological qualities of the loanwords. If frequency was also included in creating the categories, the results may have turned in favour for my initial assumption. As mentioned, the level of integration seems to be a major factor in loanword processing. The results could have been different, had I categorized the words according to native speaker judgments on how Norwegian the word was, in addition to using the three categories I constructed. An

explanation for why the categories failed as a predictor may be due to erroneous categorization of the loanwords. This can be interpreted from the mean reaction times extracted from the experiment, see table 1. It illustrates that the categories constructed for this experiment, did not have significant differences in response times. In addition, the reaction time for the first category of loanwords did not correlate to the reaction times of the second category. This could indicate that the words included in these two categories were too similar, thus not giving the desired result.

Another issue I encountered from the onset of the experimental phase regarded the reliability of the test sample body. In gathering participants for my sample, I had to pick people from my own social circles, due to time constraints. This made it difficult to know what the actual English proficiency of the different individuals was. The way I could be able to categorize the sample, was to conduct the experiment and then analyse the data from my proficiency test. Having a larger sample would have increased the reliability of an experiment. However, the way the sample was created could turn the data unusable, as it is not a representative for the wide population. Another problem I faced during testing was the time it took to complete the whole experiment. To test one subject took approximately 50 minutes, and by the time a participant had completed the first test (about 20 min) I observed that they grew weary from sitting in front of a computer screen. This could have an effect on how accurate their answering was during the proficiency tests.

Concerning the most salient predictor in the experiment, the subjective rating of how Norwegian the loanword was, the rather narrow variation within the test subject group could have been a factor, which made the familiarity of the word such an important predictor. The reason for this is that subjects chosen to rate the sample words, were all in the same age group, ranging from 20-26, thus representing the younger generation of the Norwegian speech community. The result of using such a homogenous group could have contributed to obscuring my data. It would therefore be interesting to investigate whether there are differences between the various age groups, concerning loanword processing. My initial assumption would be that older generations would have had less contact with specific domains, in which many loanwords stem from and would therefore not recognize a larger part of the loanwords used in the present experiment. Related to this, it would also be interesting to investigate whether there are differences in the age of acquisition (AoA) in L2, concerning loanword processing. A lower age of onset regarding L2 acquisition may prove to be a factor, which increases the effectiveness of loanword processing. In addition to these predictors, a

test of how various levels of proficiency interact with loanword processing would be an interesting aspect to discover. This can be related to different AoA's in addition to testing various age groups. As my own results proposed, a lower proficiency in English will result in slower reaction times. However, how large the difference between various proficiency groups are, remains to be discovered.

As a final remark on possible suggestions for further research, one could also use the data from Bialystok on transfer of reading skill (Bialystok et al., 2005a), and apply it to reading loanword in sentences. Will there be differences between participants in reading sentences containing loanwords, as opposed to sentences, which only contain *native* words in a given language? Based on my results, one could assume that low proficiency speakers will use longer time reading texts, containing loanwords than high proficiency speaker would.



## 6.0 Conclusion

The results provided from this present study, show that the initial categories, that were based on theoretical considerations did not have an effect. However, it turned out that the level of integration the loanword has in the target language, is important concerning the lexical processing. English loanwords, which are rated as familiar by native speakers, is faster and more correctly processed by Norwegian native speakers. According to the analysis done, five predictors proved to be significant in loanword processing. Depending on the length of the loanword, items were processed faster (short word length) or slower (long word length). This is also be applied to regular words, as reading longer letter strings will take longer, than reading shorter strings. The most salient predictor, as I mentioned earlier, was the concerning how Norwegian the English loanword seemed to native speakers. This factor, in addition to the words frequency in the target language, can account for how integrated the loanword is. An assumption that can be drawn from these results is that the level of integration is key for lexical processing, as less integrated words would be regarded as foreign for native speakers. The remaining two predictors were based on language competence in both English and Norwegian. A higher level of English grammar competence, in addition to a higher subjective rating in Norwegian writing skill, accounted for more precise responses and faster reaction times.

Looking back at the hypothesis for the present experiment, one can draw the following assumptions: The level of foreignness predicts how participants process loanwords. In other words, a high level of integration in the target language will result in faster reaction times and more accurate responses. As it turns out, the level of integration a loanword has is not completely dependent on orthographic or phonological appearance, but also on whether or not it is accepted by the speech community. The orthographic, phonological and morphological properties of a word, in addition to its frequency in the target language combined, will influence how native speakers rate the word according to familiarization. In addition to these aspects, many social and linguistic factors come into play, when a loanword is applied to a target language. Factors such as domain, cultural dominance and prestige, are among the social factors that can be used to explain the choice of loanword usage (Haugen, 1950). Furthermore, linguistic factors such as frequency and equivalence are also part of the process (Field, 2002). The complete picture, as to how loanwords end up from being a foreign word in another language, to becoming a fully integrated word in another, is highly complex, and far extends the bounds of this project. However, what can be stated is that processing loanwords



depends highly on the degree of acceptance of the native speakers of a given target language, in addition to depending on the overall language competence of its users.

Concerning the secondary goal of the hypothesis of proficiency, the results show that a high level of language competence will make a speaker more able to, accurately process a given loanword. A higher level of proficiency may indicate that English is used more frequently, thereby granting a speaker the ability to use a wider array of loanwords in their native tongue, and also recognizing loanwords in texts, they read. Referring back to the question asked in the introductory section, whether one should give some sort of homage to the English language, for its extensive usage in Norwegian, one could answer it briefly by stating that the integration and usage of loanwords is an ongoing process, which will not stop as long as there are users of a given language. Rather than denying the entry of new vocabulary from foreign language, one could embrace the loanwords, and regard them as an addition, which serves to enrich the target language.

## 7.0 Literature

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## Appendix I – Loanword Categories

	Category 1:		Category 2:		Category 3:	
#	Norwegian	English	Norwegian	English	Norwegian	English
1	Pønke	Punk	Ålreit	Alright	Cruise	Cruise
2	Peanøtt	Peanut	Kløtsj	Clutch	Display	Display
3	Kul	Cool	Tøff	Tough	Radar	Radar
4	Kolesterol	Cholesterol	Jus	Juice	Online	Online
5	Handikapp	Handicap	Kloss	Close	Jeans	Jeans
6	Kollapse	Collapse	Sørvis	Service	Hamburger	Hamburger
7	Sensitiv	Sensitive	Kråle	Crawl	Harddisk	Hard Disk
8	Biff	Beef	Skvise	Squeeze	Healer	Healer
9	Streik	Strike	Koks/Kåks	Coke	Interface	Interface
10	Faks	Fax	Sofistikert	Sophisticated	Label	Label
11	Matsj	Match	Skvåsj	Squash	Laptop	Laptop
12	Boks	Box	Sjåk	Choke	Marshmallow	Marshmallow
13	Klovn	Clown	Tøtsj	Touch	One size	One size
14	Foto	Photo	Kompanjong	Companion	Outfit	Outfit
15	Prest	Priest	Røff	Rough	Overkill	Overkill
16	Jass	Jazz	Skvær	Square	Printer	Printer
17	Sjarter	Charter	Gir	Gear	Remix	Remix
18	Budsjett	Budget	Køntry	Country	Research	Research
19	Ketsjup	Ketchup	Trøbbel	Trouble	Sorry	Sorry
20	Prosjekt	Project	Bøffel	Buffalo	Action	Action
21	Konteiner	Container	Dønn	Done	Album	Album
22	Krasj/Kræsj	Crash	Streit	Straight	Alien	Alien
23	Skanne	Scan	Eksplasjon	Explosion	Baby	Baby
24	Breikdans	Breakdance	Sjakk	Chess	Blender	Blender
25	Alarmert	Alarmed	Tråle	Trawl	Hangglider	Hang glider
26	Komfortabel	Comfortable	Milits	Militia	Hardware	Hardware
27	Skåre	Score	Pledd	Plaid	Manager	Manager
28	Sientologi	Scientology	Mannekeng	Mannequin	Medley	Medley
29	Boikott	Boycott	Sjanger	Genre	Multimedia	Multimedia
30	Sjampo	Shampoo	Gjeng	Gang	Smart	Smart
31	Bløffe	Bluff	Døll	Dull	Partner	Partner
32	Vaier	Wire	Klæsj	Clash	Pickup	Pickup
33	Insentiv	Incentive	Dæsj	Dash	Piercing	Piercing
34	Attraktiv	Attractive	Sjal	Shawl	Play	Play
35	Attraksjon	Attraction	Boms	Bum	Puck	Puck
36	Klubb	Club	Kjangs	Chance	Receiver	Receiver
37	Interaktiv	Interactive	Kjeks	Cakes	Spoiler	Spoiler
38	Kode	Code	Treane	Train	Sprint	Sprint
39	Lunsj	Lunch	Pai	Pie	Tank	Tank
40	Missil	Missile	Kveker	Quaker	Vintage	Vintage



## Appendix II – Questionnaire

### Bakgrunnsinformasjon for forskningsprosjekt om lesing og ordprosessering

Tusen takk for at du har sagt ja til å delta i vårt forskningsprosjekt om lesing og ordprosessering. I dette skjemaet ber vi om bakgrunnsinformasjon som er nødvendig for at resultatene fra undersøkelsen skal kunne brukes.

Alle opplysningene du gir her, vil senere bli behandlet uten direkte gjenkjennende opplysninger. En kode knytter deg til dine opplysninger gjennom en deltakerliste. Det er kun autorisert personell knyttet til prosjektet som har adgang til deltakerlisten og som kan finne tilbake til infoen. Del B og C av dette skjemaet vil bare oppbevares med koden. All informasjon vil bli anonymisert ved prosjektslutt. Det vil ikke være mulig å identifisere deg i resultatene av studien når disse publiseres.

Legg merke til at skjemaet har 4 sider.

Med takknemlig hilsen,

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### Del A: Personlig informasjon

Fag/Yrke: \_\_\_\_\_

Fødselsår: \_\_\_\_\_

Kjønn       Kvinne       Mann

Bostedskommune: \_\_\_\_\_

Deltakerkode:  
(Fylles inn av prosjektleder)

## Del B: Språklig bakgrunn

### Morsmål

Er norsk morsmålet ditt?

Ja  Nei

Hvis ja, har du andre morsmål i tillegg?

Ja  Nei

Hvis ja, hvilke(t) språk? \_\_\_\_\_

Hvilket språk bruker dere hjemme? \_\_\_\_\_

På norsk, hvilken dialekt snakker du? \_\_\_\_\_

Hvor i Norge har du bodd, og hvor lenge?

Kommune	Antall år totalt

### Hvor ofte leser du tekst skrevet på bokmål?

hver dag      flere ganger per uke      et par ganger i uken      av og til      aldri

### Hvor ofte skriver du tekst på bokmål?

hver dag      flere ganger per uke      et par ganger i uken      av og til      aldri

### Vil du definere deg selv som en som bruker bokmål?

ikke i det hele tatt      nesten      mer eller mindre      stort sett      fullstendig

## Engelsk og andre fremmedspråk

I **engelsk**, hvordan vurderer du ferdighetene dine på hvert av disse områdene?

	Grunnleggende	Middels	Avansert	Flytende
Lesing				
Skrivning				
Snakke				
Lytte				
Totalt				

**Hvor ofte leser du tekst skrevet på Engelsk?**

hver dag      flere ganger per uke      et par ganger i uken      av og til      aldri

**Hvor ofte skriver du tekst på Engelsk?**

hver dag      flere ganger per uke      et par ganger i uken      av og til      aldri

**Vil du definere deg selv som en som bruker Engelsk?**

ikke i det hele tatt      nesten      mer eller mindre      stort sett      fullstendig

Har du bodd i, eller hatt lengre opphold i, et land hvor engelsk er hovedspråk?

Ja     Nei

Hvis ja, hvor lenge varte oppholdet/oppholdene? \_\_\_\_\_

\_\_\_\_\_

Har du bodd i, eller hatt lengre opphold i, et land hvor annet enn engelsk er hovedspråk?

Ja     Nei

Hvis ja, hvor var det, og hvor lenge varte oppholdet/oppholdene?

\_\_\_\_\_

Hvilke språk kan du utover morsmålet ditt og engelsk?

(Hvis du ikke snakker andre språk, gå til **del C**)

Språk	Nivå			
	Grunnleggende	Middels	Avansert	Flytende
Tysk				
Fransk				
Spansk				
- angi språk				
- angi språk				
- angi språk				



## **Del C: Andre faktorer i språklæring**

Har du, eller har du hatt, problemer med synet utover normal brillebruk?

Ja     Nei

Har du, eller har du hatt, problemer med hørselen?

Ja     Nei

Har du, eller har du hatt, språkvansker av noe slag (spesifikke språkvansker, lese-/lærevansker eller lignende)?

Ja     Nei

Har du, eller har du hatt, andre diagnoser som kan tenkes å påvirke språklæring (ADHD, autisme eller lignende)?

Ja     Nei

Er du venstrehendt?

Ja     Nei